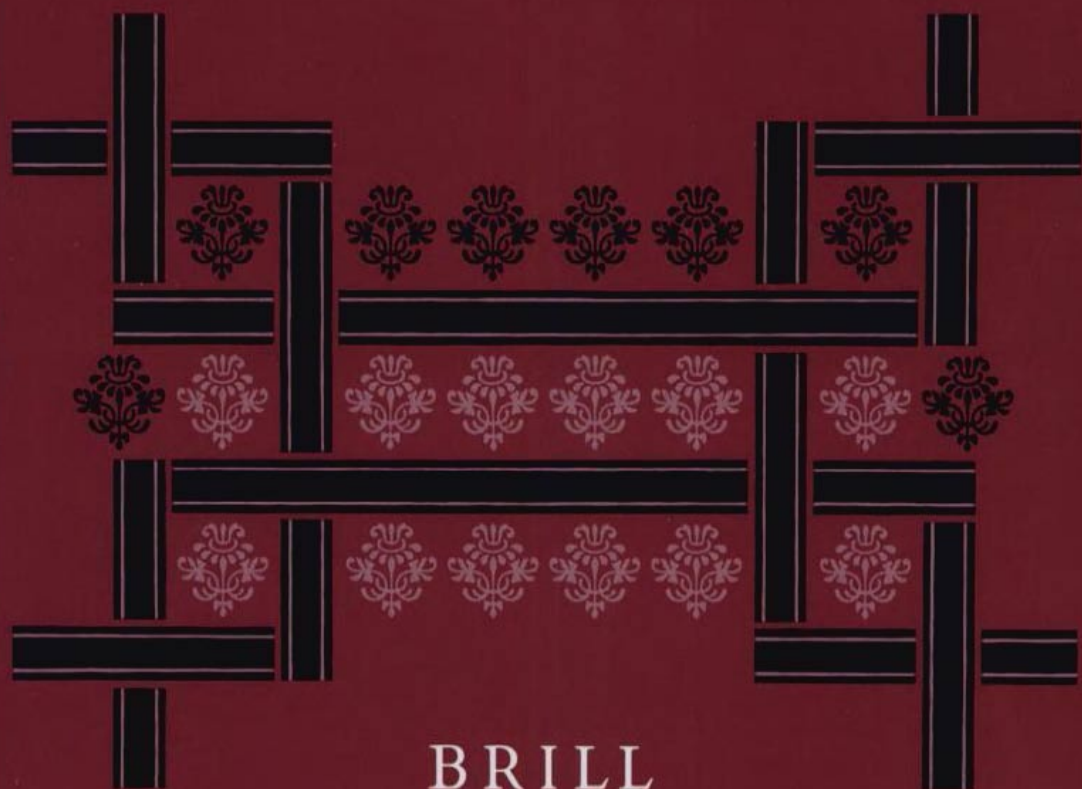


Aristotle's  
Theory of Predication  
*by*  
Allan T. Bäck



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## ARISTOTLE'S THEORY OF PREDICATION

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ALLAN T. BÄCK

ARISTOTLE'S THEORY OF PREDICATION



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BY

ALLAN T. BÄCK



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## PREFACE

### AN ARISTOTELIAN THEORY OF PREDICATION

The topic of the present study, the Aristotelian theory of predication, may seem dry and specialized. For surely it concerns the history of logic, and not the philosophical issues of more general interest concerning human beings in the world.

On the contrary, I submit that this impatience with logical issues and the lack of their popular philosophical appeal reveal more about prejudices of current scholarship and culture than about the material. Although some of us moderns may find logic a tedious, specialized, gymnastic preliminary to those areas of philosophy that hold wider human interest, such is not the classical attitude. Nor, by the way, has it been the attitude of modern analytic philosophers, nor, for that matter, the attitude of various Indian and Chinese schools.<sup>1</sup>

Indeed I find that it is with an air of excitement and near awe that Greek philosophers even as early as Parmenides and Socrates seized upon the arguments and *logoi* with which the dialectical Muse was gracious enough to inspire them.<sup>2</sup> Parmenides concluded, from the impossibility of *saying* that what is not is, that plurality, change, and time cannot *be*. In effect, Parmenides analyzed the structure of statements taken to be true. He then inferred some consequences from them: to say that a dog is not a stone is to say that a dog is not; to say that a dog is not alive always is to say that something that is has come to be from what is not, but then something would come to be from nothing. From these inferences, he concluded that it is impossible for there to be change and plurality. For the possibility of such states cannot even be stated consistently. Here then we see early on the penchant for inferring the structure of the world from the structure of talk about the world—a naïve penchant, perhaps, but then philosophy, being theoretical, has to begin with talk: “to rob us of discourse would be to rob us of philosophy.” [*Soph.* 260a]

Socrates too liked collecting arguments. Indeed, sometimes the dialogues of Plato seem needlessly prolix and playful, in part merely because Socrates and his audience appeared to delight in the sport of dialectic. Yet this delight is not the delight of an unaffected spectator or the detached

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<sup>1</sup> So the Vedic Nyāya school and the rectification of names in Confucian thought.

<sup>2</sup> *Pace* Stanley Rosen.



collector: following the course of the *logoi* commits the participant in dialectic to change in belief and in life so as to remain consistent with how the inquiry has turned out.<sup>3</sup> Words and deeds—and reality—should not be segregated.

Even in the late dialogues, where Plato is wrestling with the Eleatic legacy, we can see both the delight in arguments and the conviction of their central importance for living. The extensive dialectic of the second part of the *Parmenides* may strike us as too structured and as quite redundant. But surely some of its prolixity lies in playfulness: witness the Form of Shithood. [130c-d] Yet, at the same time, ancient followers of Plato considered it to be perhaps the most profound passage of Plato's writings.<sup>4</sup>

Logical doctrines clearly have central importance in Plato's dialectic. In the *Sophist*, through his account of the interweaving of Forms, Plato offers a way of bridging the Eleatic gap between being and not-being, and providing an intermediate position for the world of becoming. In this way he systematizes the two Routes of *Parmenides*. [258c-d] In the course of these ontological efforts, Plato gives a theory of statement and predication, indeed, the very theory that Aristotle continues to develop in *On Interpretation*. [262b-264a] The other Forms have to combine with Being in order to have being or exist, if not *in re*, at least *in intellectu*: for we have to be able to say that not-being is not, and to do so requires that not-being be in a certain respect. [256d-e; 257b-258d]

To be sure, Aristotle continues Plato's critique of *Parmenides* ontologically in *Physics* I and in *Metaphysics* I. Yet, in equal measure, he pursues his critique in the logical works, such as *On Interpretation* and the *Sophistical Refutations*. He is not pursuing different goals in these various logical and ontological texts. Of course, they do vary in focus. Aristotle himself recognizes this, as he regularly breaks off a discussion in his logical analyses about language, only to resume it in the ontological investigations of reality.<sup>5</sup> Still, since in the ontological discussions Aristotle must contend not with the realities themselves but with *statements about* those realities, his logical analyses of those statements have great relevance for him.

Indeed Aristotle's complaints about rival theories generally begin from logical critiques. Thus Aristotle attacks *Parmenides* for committing the fallacy of *secundum quid et simpliciter*: to say that Socrates is not a dog is indeed to say that Socrates is not, in a certain respect, but not to say that Socrates is not, without qualification. [*Soph. El.* 167a1-5] In turn, Aristotle

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<sup>3</sup> Cf. *Laches* 189d-e; so too Al-Ghazali, *The Foundations of the Articles of Faith*, pp. 20; 26.

<sup>4</sup> So Proclus in his commentary on the *Parmenides*, 640-1.

<sup>5</sup> E.g., compare *On Interpretation* 11 with *Metaphysics* VII.6.

attacks Plato on such grounds as postulating a single Form for a universal term that has no unity: how can there be a single Form of the Good, when there are the ten ultimate categories of being? [*Eth. Nic.* 1096a23-34; *Eth. Eud.* 1217b25-35] For Socrates is good, in the respect that a human can be good; walking is good in the way in which a locomotive activity can be good for the walking organism; justice is good in virtue of how a moral virtue is good. As 'good' is said in many ways, it provides no underlying unity for the supposition of a single Form of the Good.

We see here already how prevalent talk of aspects is for Aristotle: being has different respects; good is said in different ways. What I propose to do here is to look at Aristotle's views on predication in terms of a theory of aspects. I hope that my preceding prefatory remarks have given a sufficient motivation to look seriously for that theory in Aristotle's account of predication. For as "being is said in many ways," Aristotle needs a logical theory of the many ways in which being is *said*. And why not take such talk literally? If "being is said in many ways," why not embrace a theory of predication in which being is the central notion, which is specified in different respects? Already in Plato's *Sophist* we can see hints of such a view: for other Forms have to combine with being ( $\tau\omicron\ \delta\upsilon$ ) in order to have existence in reality or thought. For Plato 'being' is no mere copula, connecting subject and predicate, but is a real presence. [254d] This real presence may be specified in various ways, via its linkages with other Forms, and such specifications are reflected in statements: the interweavings of words reflects the interweavings of Forms. [253b] But still being as presence holds the central position in (non-deviant) statements. By 'presence' I mean not mere 'existence' but 'existence together with a copulative function': for being can be determined in many ways, such that the subject is linked to further specification by the aspect predicated. So we have here, as it were, *existence with hooks*.

I contend then that my logical study of Aristotelian predication will have great relevance for the more popular concerns of Aristotelian philosophy. In recent years, many scholars have concluded that Aristotle, like Plato and Parmenides, has a single sense of 'be'. They have done so mostly on grounds of linguistic analysis and of interpretations of doctrines, largely in the metaphysical texts. My project here can be located vis à vis this scholarship thus: I return to look at the logical doctrines in light of it.

Moreover, I contend, contemporary philosophers too can learn a lot from these Aristotelian theories: for I shall be offering a "new" way to understand predication, derived from traditional, Aristotelian logic but avoiding some of the mistakes commonly attributed to it. Instead of preaching further for this claim, I propose to proceed. In the course of my study, I shall illustrate connections between the logical and ontological doctrines, and their philosophical worth. For the proof lies in the doing.

### *Notation and Conventions*

In what follows, I translate all passages myself. I do not do so because I have *hubris vis à vis* current translations; indeed I have consulted them regularly, especially *The Revised Oxford Translation of Aristotle*, edited by Jonathan Barnes. Rather, I do so because I need a very literal translation, with the same words being translated in the same way in different texts. For many of my points depend on the particular phrasing of the text, and on the particular terms being used. In the quotation of (Latin) texts, I have standardized the spelling.

I use square brackets, '[...]', to indicate my own interpolations, additions, and comments; pointed brackets, '<...>', indicate those of others. Single quotes indicate that the expression inside is being mentioned, and not used. (Mentioning accommodates a variety of differing operations.) Double quotes indicate a direct quote, and also perhaps that the expression is being mentioned or misused ("scare" quotes). Abbreviations for the works of Aristotle et al. are from the *Oxford Classical Dictionary*.

I use 'object' to refer to things that are supposed to exist *in re* as self-subsistent; in Aristotle's cases these are the primary substances. 'Attribute' refers to a real property of an object, namely, what predicates, be they essential or accidental, are claimed really to signify. 'Real things' or 'items' are objects and attributes. 'Means' indicates a verbal, lexical equivalence; 'signifies' or 'names' indicates reference to a real thing. I use 'name' and 'verb' in the technical sense indicated in *On Interpretation* 2-3, and 'expression' to cover a linguistic unit, composed of one or more words. 'Term' I reserve for Aristotle's use in his syllogistic. 'Sentence', 'noun', and (again) 'verb' I use to indicate grammatical items. 'Statement' has a more technical sense, as I shall explain. I avoid the use of 'proposition' due to its modern connotations; 'premise' and 'conclusion' I use in the context of inference.

For the sake of clarity of exposition, I shall use the notation of modern classical (Frege-Russell) predicate logic in a natural deduction system.

## INTRODUCTION

The copula is indeed, as Hobbes asserts, a sign which unites the predicate to the subject. The idea that the copula *est* on top of this expresses *existentia* is mere mysticism.<sup>1</sup>

In an earlier article, I presented an Aristotelian theory of predication.<sup>2</sup> This theory was most clearly held by Islamic philosophers, notably by Ibn Sina (Avicenna), with earlier precedents and later successors. It certainly originated from a concern with Aristotle's texts, issues, and problems. Indeed, I pointed out there how that theory could resolve certain well known difficulties with Aristotle's philosophy. So, for instance, I discussed how this theory would save Aristotle from the charge of ignoring the existential import assumption in his syllogistic, and would incline him towards a study of being *qua* being and substance. However, I left it open there to what extent that theory had been Aristotle's. Here I propose to address that issue.

It may be objected that, even if this theory of predication holds promise in solving certain puzzles of Aristotle's philosophy, it still does not follow that it was Aristotle's. Moreover, some of the attractiveness of this theory of predication might be anachronistic: some of these issues may not have been the concerns of Aristotle himself, but may have arisen later, in other contexts; perhaps Aristotle never worried about existential import.

I admit that I cannot defend the strong claim, that Aristotle explicitly states and holds the aspect theory of predication clearly. To establish that, I would have to find texts where Aristotle states it explicitly and clearly in detail. But clear texts surely are lacking, indeed, for this as for any other interpretation of Aristotle's views on predication.

Consequently, I shall be making the weaker claim, that Aristotle's remarks about and uses of predication are consistent with this theory, although he did not state it extensively or clearly. Moreover, I shall seek to show that my interpretation explicates Aristotle's remarks about and uses of predication better than its rivals. I admit that my formulation of this aspect theory of predication has anachronistic biases, as it seeks to highlight concerns, like existential import, that Aristotle hardly addresses. Still my interpretation will try also to explain why Aristotle would, and should, not have been bothered by such concerns.

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<sup>1</sup> Watsuji Tetsurō, "The Significance of Ethics," p. 406.

<sup>2</sup> Allan Bäck, "Avicenna on Existence."

I first shall consider the linguistic evidence for the plausibility of this theory of predication in Aristotle's Greek. I shall argue that linguistic usage sets a necessary but not a sufficient condition for the success of this theory, and that this theory meets that condition. I then shall turn to Aristotle's theoretical remarks on predication, and shall determine whether Aristotle holds this theory, and, if so, whether explicitly or implicitly. In brief, I shall conclude that Aristotle does hold it explicitly, but finds it so obvious as to be not worthy of extensive explicit elaboration. Hence we find his views on predication unclear and obscure.

Many philosophers today are suspicious of logical and especially metaphysical theories because they often seem to express the particular, contingent theory of a given language or a way of life. This theory of predication has some immunity to such a charge. For this theory not only was endorsed, so I claim, by Aristotle in Greek, but also by native Arabs (of the Kalām) in Arabic, and by a native Persian (Avicenna) in Arabic and Persian, and perhaps by various Europeans in Latin. To be sure, most of its adherents were all socialized into the Aristotelian philosophical tradition. Yet they were weaned away onto it from different languages and ways of life. So such theories should not be dismissed *a priori* as of merely subjective or historical interest.

### *Statement of the Aspect Theory of Predication*

But the more I work at a simple and systematic exposition of an Aristotelian theory of predication, the less I know what I want to say.<sup>3</sup>

In brief, the theory of predication that I have located, most clearly in Islamic Aristotelian philosophy, runs as follows: a standard Aristotelian subject-predicate sentence (one of *tertium adiacens*) of the form, 'S is P', is to be read as 'S is existent as a P'. So, for example, 'Socrates is (a) man' is to be read as 'Socrates is existent as a man'; 'Socrates is just' as 'Socrates is existent as just'; 'every man is an animal' as 'every man is existent as an animal'; 'man is animal', taken as a predication of genus of species, as 'man is existent as animal'. On such a reading, even a seemingly simple predication will have compound truth conditions: e.g., the truth of 'Socrates is existent as a man' requires both that Socrates be existent and that Socrates be a man (i.e., that 'man' signifies one of the attributes of Socrates). The latter condition, that Socrates be a man, is not equivalent to the original predication to be analyzed; if it were, it would beg the question. Rather, in

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<sup>3</sup> Robin Smith, "Predication and Deduction in Aristotle," p. 43.

Aristotelian jargon, it could be expressed more strictly as ‘man is predicated (or: ‘said’, in a general sense) of Socrates’.<sup>4</sup> So, on this theory of predication even a simple assertion, of form ‘S is P’, is a disguised conjunction: ‘S exists and P is predicated of S’.

It was explicitly recognized already in Islamic treatments of the square of opposition that espoused this theory that the contradictories of simple predications, understood in this way, will be implicit disjunctions, and so have disjoint truth conditions, each of which suffices for the truth of the contradictory. So, ‘Socrates is not a man’, taken to be the contradictory of the simple affirmation, ‘Socrates is a man’, is equivalent to ‘it is not the case that Socrates is existent as a man’, and hence to ‘it is not the case that Socrates is existent and Socrates is a man’. Thus it was stated that for the truth of ‘Socrates is not a man’ either ‘Socrates does not exist’ or ‘man is not predicated of Socrates’ suffices.

I shall refer to this theory of predication as the *aspect theory* of predication, as the predicate is supposed to stipulate a certain aspect of existence of the subject.

Although I shall support the following historical claims further in Chapter Nine, let me say who held this aspect theory explicitly. In later Greek philosophy, the texts are not decisive, but, in decreasing order of probability, some Stoics, Philoponus, and Theophrastus might have held it. Moreover, this theory clearly had Islamic adherents. Among the philosophers of the Kalām, it was held that a statement of form ‘S is’ (*al-S kāna*) makes a claim of existence. Further in a statement of form ‘S is P’ (in every case or with only some types of verbal complements), ‘P’ must be taken as an accusative specifying the state: ‘S is existent as a P’. E.g.,

‘Zayd is knowing’ is to be read as “Zayd *is*...and that his *is*, insofar as it is stated in this proposition, is a being knowing. That he have an attribute is that he be qualified in his being by an attribute...i.e., that he be in some state.”<sup>5</sup>

Avicenna (Ibn Sina), following some combination of the Kalām, Philoponus, and his own genius, likewise analyzes ‘S is P’ into ‘S is existent, and P is an attribute of S’.<sup>6</sup> With the simple denial, ‘S is not P’, Avicenna says, consistently, that it is true either if S does not exist or if P is not an attribute of S. He further distinguishes and lists, in line with the Greek commentators, the various ways in which the second condition, ‘man does not belong to Socrates’, could be satisfied. The fate of the aspect theory of predication

<sup>4</sup> Aristotle uses ‘said of’ (λέγεται κατά) thus of ‘is’ itself: *Metaphysics* 1003b1-5.

<sup>5</sup> Richard M. Frank, *Beings and Their Attributes*, p. 23; cf. p. 21.

<sup>6</sup> *Al-Ibarrah* 77,8ff.

theory in Latin medieval philosophy is less clear than in Islamic philosophy, but Ockham, Buridan, and De Soto are possible supporters.

Here, though, I shall focus on Aristotle's own texts. I shall address the problem whether Aristotle might be said to hold this theory of predication. However, first let me dispel some modern misgivings over how stupid this theory may appear to be. For the aspect theory might appear to be logically naïve or confused through not distinguishing the 'is' of predication, existence, and identity.

Still, it does not follow, even if so, that it does not describe the Greek uses of 'is' or that Aristotle did not hold it. Indeed, making such fine distinctions of the uses of 'is' may leave us open to charges of anachronism. Although these issues properly belong to sections below, I shall address them somewhat here, to offer motivation for taking this theory seriously.

### *Modern Qualms*

One major, and perhaps negative, feature of the aspect theory is that it takes 'is' (ἐστίν) to have only a single use, sc., of indicating real presence that can be specified further: what I have called "existence with hooks". Yet many will find this feature logically embarrassing, on account of conflating various logical functions performed by 'is'. Different logicians will see different conflation. Still popular choices will include: 1) confusing the 'is' of predication with the 'is' of existence (as well as the 'is' of identity and the constitutive 'is') 2) confusing the 'is' of instantiation with the 'is' of superordination 3) confusing two types of existence: the existential quantifier and the attribute of being perceived or perceivable at the present time. I shall discuss briefly each in turn.

1) Has Aristotle, or, in any case, this aspect theory, confused different logical functions of 'is'? Rather, on the contrary, the aspect theory at the very least makes progress in disentangling various uses of 'is' from the occurrence of a single lexical item, 'be'. Moreover note that in ordinary language, in Greek as well as in English, 'is' is but a single word, used in many ways. While recognizing different functions made by 'is' even in a simple statement, the aspect theory still preserves the unity of the word 'is'. In contrast, on the modern, Frege-Russell approach, a multiplicity of symbols is proposed, so as to have a monotonic relation of one symbol, one function. Thus, the 'is' of identity may be presented by '='; the 'is' of exis-

tence by  $(\exists x)$ , the 'is' of predication by position (of a function and its argument), as in 'Fa', etc.<sup>7</sup>

Nevertheless, if the aspect theory satisfactorily handles these different logical functions of 'is' with a single, basic notion, of real presence with hooks, it would have an advantage over the modern theory. For it would be simpler, and would mirror actual usage in ordinary language, in some languages, more closely. Now, in his discussions about logical inferences involving 'is', Aristotle clearly worries about fallacies arising from conflating different logical structures; e.g., in his discussions of the inference from 'S is not P' to 'S is not'. He then offers ways and rules to avoid such mistakes. His solutions may not work out. But, if they do, his theory would be preferable to the modern approach on account of its greater isomorphism with ordinary language. For it recognizes the different logical functions of 'is', while keeping to its unity.

Furthermore, the aspect theory of predication has further interest if it avoids some pitfalls of the modern approach, without digging new pits. For instance, an embarrassment of modern symbolic logic is that it cannot make assertions, negative or positive, of individual subjects: 'Socrates exists' and 'Socrates does not exist' are both ill-formed, as they would require existential quantifiers to bind an individual constant ( $*(\exists s)s*$ ). But we do make such assertions in ordinary discourse, and so the logic looks flawed.<sup>8</sup> Now the aspect theory allows such assertions to be well formed. Some like Carnap would view this as a drawback.<sup>9</sup> But surely it would be nice if we had a logic neutral enough not to prejudge such substantive issues.

Again, Frege-Russell logic in its usual versions rejects denials with referring subjects, like 'Socrates does not exist', as ill-formed (as 'Socrates' is a logically proper name), while allowing denials with non-referring subjects, like 'the dodo (a kind term with no present instances) does not exist' or 'Pegasus is not flying', when 'Pegasus' is not a logically proper name but a disguised definite description. However, in ordinary language, the two types of denials look quite similar, and it would be nice to have an analysis that gives them a common structure while recognizing their differences.

To be sure, 'Socrates does not exist' might be symbolized as  $\sim(\exists x)(x = s)$ . But, Russell says, this expression is not well-formed, if 's' be taken to

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<sup>7</sup> Jaakko Hintikka, "The Varieties of Being in Aristotle," pp. 81-2, notes that many logicians and scholars of ancient philosophy have currently begun to question or modify the Frege-Russell approach.

<sup>8</sup> Cf. Karel Lambert, "The Nature of Free Logic," p. 5. I discuss free logic in Chapter Nine.

<sup>9</sup> Rudolf Carnap, "The Elimination of Metaphysics through the Logical Analysis of Language," p. 74.



be an atomic constant.<sup>10</sup> For every atomic constant is an element in the domain. Thus ' $\sim(\exists x)(x = s)$ ' would be necessarily false, even if well formed. The other usual ("modern classical") way to handle such statements is to eliminate some or all proper names and take atomic constants to be disguised definite descriptions, or, at any rate, to use some structure so that individual constants need not refer.<sup>11</sup> Indeed, Quine sees no problem in giving all proper names the status of universal or general terms, or as a general term true of many spatio-temporal parts, or space-time points.<sup>12</sup>

But here the distinction between singulars and universals has started to vanish: for a singular term has become a disguised universal term, plus an attached uniqueness condition. Then, as Quine recognizes explicitly, we have a Platonism. But the original notation of predicate logic rejected such a Platonism, which eliminates the sharp distinction between singulars and universals.<sup>13</sup>

Perhaps this distinction should be eliminated. But then idealism would prevail on logical and not on ontological grounds. Perhaps even that is right, as some Hegelians might claim. But, if so, my study of Aristotelian predication would have major importance, if it succeeds in showing how a logic, developed along with an Aristotelian ontology, which does distinguish sharply between singulars and universals, can handle our existence claims consistently and satisfactorily.

2) Again, both in notation and theory, modern logic sharply distinguishes predication of a universal from predication of a singular. E.g., 'Alfonse is a frog' and 'a frog is an animal' are symbolized ' $Fa$ ' and ' $(x)(Fx \supset Ax)$ ' respectively. In contrast, as I shall discuss below, Aristotle treats these predications as having the same logical form. Thus, 'all frogs are animals' and 'Alfonse is a frog' both have the common Aristotelian logical structure of essential predication, being "said of". Unlike modern predicate logic, we have no difference in logical type between such predications. Aristotle views singular and universal predication as being so much alike that he may even countenance quantification over proper names, and speaks of 'every thinkable Aristomenes always exists'—despite an ontology that distinguishes sharply between singulars and universals. [*An. Pr.* 47b28-9] From the modern viewpoint, Aristotle has here naïvely given a feature of

<sup>10</sup> Bertrand Russell, *Principia Mathematica* 66; 174.

<sup>11</sup> Bertrand Russell, "On Denoting," p. 54; W. V. O. Quine, "On What There Is," pp. 7-8. *Mathematical Logic*, pp. 199; 249. Quine has several theories; cf. Alex Orenstein, *Existence and the Particular Quantifier*, pp. 126-31.

<sup>12</sup> W. V. O. Quine, *Mathematical Logic*, pp. 149-52; *Methods of Logic*, pp. 149-51; 220-4; *Word and Object*, pp. 182-3.

<sup>13</sup> Indeed, we shall see this very proposal mentioned and then rejected by Aristotle in *Physics* I.3.

universal predication to singular predication, so as to confuse logical types by putting quantifiers in singular predication. Or, again, modern logicians may view Aristotle as naïve, as he refuses to allow any quantification of predicates of statements to be well formed. [*Int.* 17b12-6; *An. Pr.* 43b17-21]

However, I find the difference to be based more upon ontological than upon logical grounds. Is it ill-formed to talk of “every Socrates” or of “many Judases”? Perhaps, but not in ordinary English or Greek, as I shall mention in Chapter Six. But then the motivation to distinguish the logical form of singulars and universals seems to derive from a strong conviction that these objects are fundamentally different, and not from the linguistic or logical structure. So why should this difference be embedded in our logical notation?<sup>14</sup>

In any case this difference between Aristotelian and modern logic does not bear on the aspect theory itself. To say, with modern logicians, that a singular term put into subject position cannot be quantified, or, with Aristotle, that quantifiers cannot be attached to a term in predicate position amounts to an additional, separate claim. These features have to do more with the different ways in which things referred to by singular and general terms exist, or have real presence, more than the bare notion of “real presence with hooks” announced by the predication of ‘is’ according to the aspect theory. As predication concerns formal features of talk about the existence itself, the distinction between singular and universal is not the main one for my project. Still, Aristotle of course does take a position on it, as I shall discuss.

3) Moreover, someone might say that the aspect theory is naïve, since it treats ‘there is’ as a simple basic notion, and does not distinguish its use as the existential quantifier ( $(\exists x) Sx$ ) from its use in asserting the actual presence of a certain individual ( $E!S$ ).<sup>15</sup> Not everyone agrees to this distinction: for consider ‘a table exists’. It does not seem to matter much whether that statement be analyzed as ‘there is an  $x$  that is a table’ or as ‘an individual table actually is present’. Even here, though, the former analysis appears less definite, whereas the latter implies the presence of an individual thing present now to the speaker and recognized as a table. But the negative cases look more decisive. Consider ‘a table does not exist’; i.e., ‘no tables exist’. On the first analysis it reads  $\sim(\exists x)Sx$ ; i.e.,  $(x) \sim Sx$ ; on

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<sup>14</sup> Indeed, note that Quine construes singular terms as universals, and so might be condoning their quantification. See note 12.

<sup>15</sup> So Parviz Morewedge has suggested to me. Likewise, one might argue that other uses of ‘is’ should be distinguished at the outset. Cf. Peter Strawson, *Individuals*, pp. 248-50. Strawson admits the attraction of a universal notion of ‘is’.

the second it asserts that an individual table is presently not out there, and to make this second claim requires, so it is claimed, that such an individual was or will be out there, in order for us to deny its presence now.

At any rate, such a distinction has been commonly made, both on linguistic and logical grounds. So Kahn claims that in Indo-European languages generally, 'there is an S' has the ' $(\exists x)$ ' use when 'there' is unstressed, and the 'E!' use when stressed.<sup>16</sup>

Again G. E. L. Owen, like Russell and Ryle, takes the distinction to hold logically, and claims that Aristotle is trapped because he does not make and use it.<sup>17</sup> Owen says that for Aristotle all existence claims have the 'E!' use. On this view, to assert of an individual subject, say Socrates, that it is not, is to claim that Socrates, who once was (or will be), is not now, and so to assume that that subject exists at some time—i.e., the 'E!' use. We may use a universal subject term to make a similar assertion about a species, as in 'the dodo is not': for once there were dodoes, but are no longer. However, what happens when we make a statement of non-existence for kinds, to assert that such a thing never has nor will exist, as in 'the goat-stag is not'? Here the 'E!' use fails. Thus Aristotle, Owen charges, although he acknowledges such claims about the non-existence of goat-stags to be well-formed and to assert the absolute non-existence of goat-stags at all times, does not have an analysis of 'be' that supports it. For him statements with universal subject terms all have the same analysis as those with singular subject terms, sc., the 'E!' analysis. Aristotle is trapped in the snares of ontology because he lacks the other, ' $(\exists x)$ ' analysis, and cannot deny existence altogether for kinds.

We shall reconsider whether Aristotle is trapped when we work out Aristotle's theory of predication below. Still, let me make two points for initial motivation. First, even in normal, extensional predicate logic, it is hard to deny the existence of a kind. If such a denial, that a kind S does not exist has the form ' $\sim(\exists x)Sx$ ', then no individual in the domain is S, and so, if predicate functions be defined in terms of sets, S is the empty set. It is not clear whether a non-referring general term, like 'goat-stag', should have the same reference as the null set. Moreover, if also the kind F does not exist, then likewise we would assert ' $\sim(\exists x)Fx$ '. But then F and S would be identical; e.g., being a goat-stag would be the same as being a unicorn. This

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<sup>16</sup> Charles Kahn, *The Verb 'Be' in Ancient Greek*, p. 31.

<sup>17</sup> G. E. L. Owen, "Aristotle on the Snares of Ontology," pp. 267-70. Russell and Whitehead, *Principia Mathematica*, distinguish, in addition to the existential quantifier, two others: one asserting the existence of an individual given in a definite description, 'E!' [§1402]; and another asserting that a class is not empty: ' $\neq$ ' [§2403]. Cf. Gilbert Ryle, *The Concept of Mind*, p. 243.

difficulty is avoided, while keeping to an extensional semantics, by stipulating that every predicate have existential import, i.e., that ' $(\exists x)\phi x$ ' be true, for all atomic predicates  $\phi$ . The ' $\sim(\exists x)$ ' construction will then hold only for denials, like 'some frogs are not green', ' $\sim(\exists x)(Sx \ \& \ Px)$ ', where frogs exist, and for complex predicates, e.g., if ' $Qx$ ' abbreviates ' $Sx \ \& \ Px$ ', we can have ' $\sim(\exists x)Qx$ '. Or, perhaps, we can also use ' $\sim(\exists x)$ ' for proper subsets of the domain: e.g., let the domain consist of individuals at different times, and let ' $\Sigma$ ' be the set of individuals in the domains at  $t_i$ , and then it may be true that ' $\sim(\exists x)Sx$ ' at  $t_i$ , relative to  $\Sigma$ , although still ' $(\exists x)Sx$ ' in general. (This move amounts to taking ' $\exists x$ ' as ' $E!$ ') The same move can be made by having a domain of objects existing in all possible worlds, and then relativizing domains for each world,  $W_i$ . Then it can be said that  $S$  does not exist in  $W_i$ , ' $\sim(\exists x)Sx$  in  $W_i$ '. Still  $S$  does exist in some  $W_i$ . But once more the ' $(\exists x)$ ' analysis has the features that the ' $E!$ ' analysis was supposed to have! The original distinction has been lost, and we are back to a single sense of 'is'.

Perhaps then we might embrace another option, like an intensional semantics, or distinguish speaker meaning from semantic meaning. But, once again, the issue arises: what sorts of items should we put into the domain? If the intensions, then also the objects instantiating them? How then to consider the relation between the intensions and those objects? How to individuate and identify intensions? Do intensions and their objects each have a new sort of existence, and, if so, do these two sorts need to be related by yet a third, more general type of existence? Would we then have multiplied entities without cause?

Of course, I do not intend these remarks on modern formal logic to be complete or decisive. I make them only to jar the complacency that we may have with our current views. Further, I wish to motivate the claim that it may not be logically naïve or inconsistent to hold to a single, simple notion of existence. So give the aspect theory a chance. Whether it is linguistically naïve I shall consider immediately below.

Second, in view of how Owen charges Aristotle's unitarian theory of 'is' with confusion and inadequacy, let me indicate now how the aspect theory might handle assertions of the absolute existence or non-existence of kinds. With an individual subject, like Socrates, to say that Socrates is asserts that Socrates is existent now. Aristotle will hold that the sort of existence can be further specified: in this case, as a substance. With a universal subject, like the species man, to say that man is asserts that man is existent. Again the sort of existence may be specified further: as a substance, as rational. A universal subject exists only if singular instances of it exist; for Aristotle such a "secondary substance" has existence only as part of an individual man. [*Cat.* 2b5-6; *Metaph.* 1070a22-4] So, if there are no individual human beings now, man is not now; if there never were nor will be

any individual human beings, man is not, simply, in the way that “the goat-stag is not”. In both cases ‘S is not’, sc., ‘it is not the case that S is’, is taken as the contradictory of ‘S is’. Aristotle clearly recognizes this use in his logical analysis of negation. Moreover, he also distinguishes the denial of real presence now (*κατὰ χρόνον*) from its denial at all times (*ἀπλῶς*). On this view, Aristotle can deny, absolutely, the existence of a kind, as in ‘the goat-stag is not’, where the truth-maker for this denial is the absence of individual substances of the relevant kind at all times.<sup>18</sup> He can also deny the present existence of individuals of a kind. Aristotle explains in his treatments of the phantasm and abstraction how we can speak of kinds that never have had any instances.

At any rate, I shall attribute this analysis to Aristotle below. In light of the above remarks about problems with the distinction of ‘(Ex)’ and ‘E!’, it need not be a silly nor even an incorrect view to have a unitarian conception of ‘is’.

So I hope to have provided some motivation to take a serious look at the aspect theory. However, we need to determine now whether the aspect theory can be a Greek one, and whether it is Aristotle’s.

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<sup>18</sup> In effect, I shall claim that Aristotle has only Owen’s “is\*\*” (See “Aristotle on the Snares of Ontology,” p. 270), and does not need “is\*\*\*”, etc., although Owen, p. 272, says that Aristotle needs both and yet further logical types for ‘is’.

## CHAPTER ONE

### THE LINGUISTIC EVIDENCE

Here I shall consider whether, or to what extent, the aspect theory of predication is consistent with the usage of the ancient Greek of Aristotle's time. To recapitulate this theory: a categorical sentence, of the form 'S is P', is to be read as: 'S is (existent) as a P'. The copula, 'is', asserts the claim of existence; the predicate 'P', if there be a further predicate, gives further information as to how S exists, namely, as a P. In the case of a sentence where the copula is not stated explicitly, as in 'S P's', this theory claims that it is nevertheless there implicitly. Thus 'S P's' is to be read as 'S is (existent) as a P', and treated as above. Hence the existence claim is fundamental for all assertions in the present indicative tense; a predicate merely gives further determinations of the existence claim.

So let me take stock of what relevance linguistic evidence could have on a logical theory of predication. Surely it has some relevance, since linguistic rules concern how the language is used, and language use determines what statements are grammatically well formed. Therefore the linguistic evidence determines in part which statements can have meaning in a given language. It would hardly do to advance a theory of predication as Aristotle's if it required statements to have a meaning that was absent from and foreign to ancient Attic Greek.

But how much relevance should the linguistic evidence be accorded? I shall claim that 1) at best conformity to ordinary usage constitutes not a sufficient but a necessary condition for the success of the aspect theory. 2) we need not require that ordinary speakers endorsed this theory explicitly, nor entertained it consciously. 3) for the aspect theory of predication to have merit, it is required only that their utterances be able to be construed in terms of this theory. 4) the theory concerns more what Aristotle thinks about predications than what ordinary language users intend to mean by making predicative statements. 5) in sum, the aspect theory is, strictly speaking, a theory about how *we* should read Aristotle's Greek, especially his logical remarks on predication.

*The Relevance of Ordinary Greek Usage*

Shall we say that the aspect theory offers a way adequate to translate or construe ancient Greek? Surely there are simpler ways of translating predicative statements, for to translate 'ἔστι Σωκράτης λευκός' and 'βαδίζει Σωκράτης' as 'Socrates is existent as white' and 'Socrates is existent as walking' seems awkward and silly. But the theory is intended not as a grammatical description but as a logical analysis of what predications assert. So too the modern logical treatment of definite descriptions has no place in ordinary speech patterns. Consequently, awkwardness in following the aspect theory in doing translations does not present a decisive objection against it.

Still, the analyses of statements given by the aspect theory must preserve, albeit awkwardly, their general meaning, although not their ambience. We do not want 'ἔστι Σωκράτης λευκός' to be analyzed as 'Aphrodite is existent in Oklahoma'. Rather the theory succeeds if it captures the semantic meaning of predicative statements, even if its parsings fail to be satisfactory when substituted into ordinary conversations or poetry.

Because the logical analysis of semantic meaning does not concern directly speaker meaning and intention, it does not matter whether native speakers themselves hold the aspect theory or even would agree to its adequacy.<sup>1</sup> Likewise, grammatical rules may hold without the speakers holding them self-consciously and explicitly. Just as grammatical formation rules for a language succeed if they describe the well formed sequence of words in that language, so too logical analyses succeed if they describe the truth conditions and inference patterns of the statements.

The theory concerns more what Aristotle, or an Aristotelian philosopher, thinks about predications in a language than it concerns ordinary language use. To be sure, predications occur in a natural language that people speak for ordinary purposes. Still, a natural language has the function, *inter alia*, of serving as a vehicle for presenting certain philosophical views, some of which concern the language itself. When ordinary language is used—some, like Wittgenstein, might say abused—in this way, some of the customs of ordinary usage may no longer hold. So it may be naïve to translate philosophical discourse solely with an eye to ordinary usage of the language that served as its medium. Ordinary usage is relevant, but perhaps more important is the theory which the philosopher is trying to express by

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<sup>1</sup> Here I am assuming a distinction between semantic meaning and speaker meaning along the lines of Saul Kripke, *Naming and Necessity*, pp. 24-6.

means of the natural language. The philosopher may distort ordinary usage for this end.<sup>2</sup>

Examples of this process are easy to come by. Parmenides' poem in posing the dilemma, 'is or is not' ('ἔστιν ἢ οὐκ ἔστιν'), hardly seems to be making a statement in normal Greek. So too Aristotle when he remarks that the statement, 'every thinkable Aristomenes always exists' (πάντα τὸν διανοητὸν Ἀριστομένην ἀεὶ εἶναι), is false, though intelligible. [*An. Pr.* 47b28-9] Again, the very way in which the usual Greek predicative statement of the form 'ὅ *S* ἔστι *P*', was translated into Arabic as 'S is existent as a P' commits linguistic butchery.

Aristotle himself has some awareness of the complex connections between his own work and ordinary practice and discourse. He typically begins his investigations with the beliefs and practices of ordinary people and of experts, the *endoxa*. In ethics as in logic, Aristotle likes to claim that what he says has some relation to ordinary practice. So he finds the *endoxa* to be important data for constructing a philosophical view, and often enumerates them. However, he does not hesitate to use them to reach conclusions that are at odds with ordinary usage and custom. So he invents names for correlatives. [*Cat.* 7a5-7] So too, in his ethics, he gives ordinary views about *eudaimonia*, and then proceeds to reach a conclusion about it that most people of his time, like ours, would reject, namely that happiness and self-fulfillment consist in intellectual activity in accordance with virtue. [*Eth. Nic.* 1048b10] As he himself notes, most people prefer material pleasures to intellectual life or virtuous activity. [1095b20; 1099a12] Or, again, when listing the virtues, Aristotle seems to proceed via collecting common views of his time about virtue, in terms of the vocabulary of ancient Greek. But then he does not scruple to invent new names for virtues and vices that no one had ever used. [1108a15]

So Aristotle does begin with ordinary practice, including ordinary language use. But he often ends up departing from it. The task for Aristotle seems to have been to seek out and present what ordinary usage should be if the ordinary person thought and spoke clearly.

In this way a logical theory of predication can be satisfactory, not only if it reflects ordinary language practice, but also if it corrects or augments it. Consequently, although evidence about linguistic practice does set boundary conditions for a theory of predication, a counterexample from it need not refute the theory.<sup>3</sup>

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<sup>2</sup> R. E. Allen, "Substance and Predication in Aristotle's *Categories*," pp. 364-5.

<sup>3</sup> D. W. Hamlyn, "Aristotle on Predication," p. 110: "...the trend of Aristotle's metaphysical thought led him towards a view of predication which involved treating it as something much more than a mere grammatical notion."



Moreover, the aspect theory is a theory about how *we* should read Aristotle's Greek, especially his logical remarks on predication. After all, the theory is given in English in the context of twentieth-century philosophy. Any theory that goes beyond the text requires some interpretation and modeling. This theory is to be taken not merely to indicate the logical structure of the sentence but also to present the very meaning of the sentence to us. That is to say, this reading gives a more accurate and perspicacious parsing of an Aristotelian sentence to our modern ears than the original text. Of course, such a parsing will concern the rendering of one language, say, fourth-century Attic Greek, into another, say, twentieth-century American English. So grammatical considerations apply here too. But we are not concerned here solely with a translation problem from one language into another. We are interested more in how we are to understand what Aristotle says about predication and in how he uses predicative statements in his philosophy.<sup>4</sup>

So my task here becomes more complex. I need to show that this theory of predication agrees with what can be said in the Greek of Aristotle's text. But I cannot take as decisive evidence, for or against this theory, ordinary Greek usage. Ordinary usage does set some boundary conditions: the theory should not require a view that is completely unintelligible in ancient Greek. Still, on the other hand, it need not be the case that the theory be one that the majority of ordinary Greek speakers of Aristotle's time would endorse as literally translating their utterances, if you could ask them. The theory need not even be one that native speakers, commoners or philosophers, in fact did or would accept. Yet it should describe their linguistic activity, although in a rather idealized and ameliorated version. The aspect theory of predication is a theory of how to read Aristotle's remarks, which themselves constitute a theory on how to understand the logical significance of sentences.

As the aspect theory suggests a uniform, existential reading of 'is', it has as its grammatical counterpart an *existential* grammatical theory: 'is' can be construed in Greek to have a basic, existential reading.<sup>5</sup> Now, if this existential theory be impossible grammatically, then the aspect theory itself would be ruled out. Hence, I need to determine if the aspect theory of predication meets this boundary condition, of being well formed grammatically.

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<sup>4</sup> Francis Pelletier, *Parmenides, Plato, and the Semantics of Not-Being*, pp. xiv; 3.

<sup>5</sup> This is not to argue that 'is' and 'exist' have the same etymology. To start with, *The Oxford English Dictionary* notes that 'exist' appears late in English, somewhat after 1565. Cf. John Nijenhuis, "Existence vs. Being: An All-Important Matter of Terminology," "'Ens' Described as 'Being or Existent'," p. 2.

So I must deal with the following linguistic issue: is the aspect theory of predication consistent with the discourse of the Greek of Aristotle's time, in particular with the philosophical discourse then? I shall deal with this issue in this chapter. There is the further issue: did Aristotle hold this theory? He might hold the theory explicitly, by stating it, or implicitly, in that his use of language and his theoretical remarks about it agrees with, or can be modeled by it. I shall consider this issue in later chapters.

### *The Grammar of Predication*

There now arises the linguistic task of determining whether it is "correct" to read Greek sentences, of the form ' $\acute{\alpha} S \acute{\epsilon}\sigma\tau\iota P$ ', existentially. In Greek the predicate, like the subject (in a sentence of this form), will be in the nominative case, as indeed it would be with any intransitive verb. Also the subject and predicate will agree in gender and number. These features hold whether the predicate complement be adjective or noun.<sup>6</sup> Indeed, when the subject term and the predicate complement agree in this way, ' $\acute{\epsilon}\sigma\tau\iota$ ' may be omitted, but may be understood implicitly.<sup>7</sup>

Word order has more flexibility in Greek than in English. The subject-verb-complement sequence is the most frequent, but other orders are possible, for emphasis or for stylistic reasons. The word order becomes especially erratic in poetry, and remember that Pre-Socratic philosophers like Parmenides wrote in poetry. One particular case has great relevance here: ' $\acute{\epsilon}\sigma\tau\iota$ ' ('is') may begin the sentence. When it does, present custom, following the Alexandrian grammarians, has it that it is accented; otherwise it is unaccented and enclitic. Sentences having such a sequence generally, although not always (it seems; see below), make existence claims: ' $\acute{\epsilon}\iota\tau\iota \theta\epsilon\omicron\iota$ ' ('there are gods').

Now custom also has it that indicative forms of ' $\acute{\epsilon}\iota\lambda\upsilon\alpha\iota$ ' ('be') in other positions in a sentence make existence claims if and only if they are accented and not enclitic.<sup>8</sup> So it is tempting to run together the two, and hold that ' $\acute{\epsilon}\sigma\tau\iota\nu$ ' in all cases makes an existence claim if and only if it is accented and not enclitic, and that in beginning a sentence ' $\acute{\epsilon}\sigma\tau\iota\nu$ ' is always accented,

<sup>6</sup> William Goodwin, *A Greek Grammar*, p. 199 §907.

<sup>7</sup> Herbert W. Smyth, *Greek Grammar*, p. 261 §944.

<sup>8</sup> William Goodwin, *A Greek Grammar*, p. 32 §144.5; Herbert Smyth, *Greek Grammar*, p. 43 §187b. There is some doubt about just how ancient this distinction, known as Hermann's rule, is. See Charles Kahn, *The Verb 'Be' in Ancient Greek*, pp. 420-4; R. M. Dancy, "Aristotle and Existence," p. 50.

and so always makes an existence claim. Going further, we might say that ‘ἔστιν’, when put later in the sentence, never makes an existence claim.

Let me make two points of caution here. First, the system of accents, being Alexandrian, comes later than the Greek of the classical period. Although it may reflect earlier usage, it is hard to tell, and the Alexandrian grammarians were not in an ideal position to tell. Aristotle’s Greek was written in maiusculæ, without accent marks. So this convention, distinguishing the ‘is’ of existence and the ‘is’ of copulation by the presence and absence of accent marks, may come too late to help much.

Second, in the Greek corpus itself, these rules about ‘ἔστιν’ do not seem exceptionless. More to the point, Aristotle does not seem to follow them. For example, consider ‘ἔστιν οὐ λευκὸν ξύλον’. [*An. Pr.* 51b28] It is translated in the revised Oxford translation as ‘it is a not-white log’.<sup>9</sup> So either the grammatical features of ‘ἔστιν’ do not fix its meaning, or they do but at best the rules given above have exceptions.

In determining whether the aspect theory of predication, I of course have looked to the grammarians. Yet Greek grammatical theory has its own history, and has taken some of its distinctions from logicians and philosophers. In particular, distinguishing uses of ‘εἶναι’ in Greek into existential and copulative uses appears to have come about quite late. Charles Kahn says,

As far as I know, the earliest grammatical discussion to combine and contrast just these two terms [‘copula’ and ‘existence’] in an analysis of *be* is Gottfried Hermann’s *De emendando rationes graecae grammaticae* (1801), where the concepts of copula and existence are imported from Christian Wolff’s logic in order to provide a rational explanation (and “correction”) of the rules for the accentuation of ἔστιν in ancient Greek...On the other hand, the distinction between the copulative and the existential uses of *be* was drawn in antiquity, but without two terms corresponding to *copula* and *existence*.<sup>10</sup>

So perhaps ancient Greek does not distinguish these uses of ‘be’ via grammatical form. To be sure, Kahn sees the modern distinction of the copulative and existential uses based upon the work of the Alexandrian grammarians. Indeed, as I shall discuss in Chapter Nine, those like Ammonius and Aquinas made such a distinction, but again, it seems, also for logical and philosophical reasons. In any case, the absence of this distinction during much of the history of Greek grammar may suggest that it did not strike many as particularly obvious or descriptive of actual usage. Rather, here

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<sup>9</sup> This sentence can be translated variously, as I shall explain below.

<sup>10</sup> Charles Kahn, “On the Terminology for *Copula* and *Existence*,” p. 141.

the later grammarians may be following logical theory and not normal usage.

Indeed, this relatively modern innovation of Greek grammar, of separating *εἶναι* into its existential and copulative uses, may create more problems than it solves. Grammatical descriptions of words serving as the copula, obscure, or, at best, do not solve, the question of the logical structure of predication. E.g., Herbert Smyth describes a copula as “an indeterminate verb that serves simply to couple a predicate substantive or adjective” [to the subject term].<sup>11</sup> He then notes that Greek has many copulae: besides *ἐσσι*, such verbs as ‘becomes’ (*γίγνεται*) and ‘appears’ (*φαίνεται*). But these verbs do more than “simply” link subject to predicate: they also give information on that linkage. E.g., ‘becomes’ in ‘Socrates becomes white’ asserts that Socrates existed [!] before he was white without that color, and then changed into being white. Thus, while seeming to favor a copulative logical theory of predication, this grammatical description of the copula in fact leaves open many questions about the logical features of the “copula”.

Moreover, as Kahn notes, distinguishing a copulative from an existential syntactic usage of ‘be’ mixes a syntactic with a semantic distinction.<sup>12</sup> He too claims that as a mere copula, ‘is’ has no meaning; as existential, ‘is’ means ‘exists’, and belongs to a class of verbs like ‘becomes’ and ‘appears’. So grammatical claims about ‘is’ may reveal little about its logical structure. The problem lies in the copulative ‘is’ performing only the syntactic function of connecting subject to predicate, while the existential ‘is’ has a semantic sense of ‘being present’ [—while at the same time connecting itself up with the subject?!]. I agree with Kahn that we should avoid such mixing of levels in a grammatical, as well as in a logical, theory. However, unlike him, I shall be taking the existential use as basic. In fact, many Indo-European grammarians take the structure of the nominal sentence as basic, and hold that ‘be’, with a basic sense of ‘exist’, comes to have the copulative function only later. Kahn takes the copulative use of ‘be’ as primitive, and its use as ‘exists’ as later and derivative.<sup>13</sup> Note too that Kahn’s view that the existential but not the copulative use of ‘is’ belongs to the class of verbs like ‘becomes’ conflicts with Smyth’s view.

Moreover, holding too much to a copulative view of ‘is’ may also create artificial problems even in grammar. Smyth notes a “redundant” use of *εἶναι* in such constructions as *σοπησθῆν ὀνομάζουσιν τὸν ἄνδρα εἶναι*

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<sup>11</sup> *Greek Grammar*, p. 237 §917.

<sup>12</sup> Charles Kahn, “Retrospective on the Verb ‘To Be’ and the Concept of Being,” pp. 1-2.

<sup>13</sup> Charles Kahn, *The Verb ‘Be’ in Ancient Greek*, p. 199 n. 221.

(literally, “they name the man to be a sophist”).<sup>14</sup> ‘ἐἶναι’ is redundant, because ‘name’ can take a double object anyway. On the other hand, ‘ἐἶναι’ is not redundant if to name, i.e., to appellate or to describe something, requires that it be asserted to have being or existence, which may then be specified further.

It is well to remember that most sentences in Greek do not use a form of ‘ἐἶναι’ at all. Rather, they consist of a subject term, separate or contained in the verb, a verb, transitive or intransitive, and perhaps a predicate complement, along with various modifiers, phrases, and clauses. So they do not have the form, ‘S is P’, but rather the form, ‘S P’s’ (‘ὅ S P’εἰ’). In the case of all intransitive verbs, as with ‘ἐἶναι’, the predicate complement is in the nominative; in the case of other verbs, the predicate complement is in other cases, often accusative but also genitive or dative.<sup>15</sup> I mention these familiar facts about the manifold constructions in Greek grammar in order to emphasize how much Aristotle is going to have to depart from the ordinary grammatical appearances of Greek in order to make all sentences mere stylistic variants of ‘S is P’ in his logic.

I shall find it useful to use the standard medieval terminology, itself derived from Aristotle [*Int.* 19b19-20] about sentence structures. A statement of *secundum adiacens* has the form, ‘S is’, with a subject term, an indicative tense of the verb ‘ἐἶναι’, and no predicate complement. A statement of *tertium adiacens* has the form, ‘S is P’, with a subject term, an indicative tense of the verb ‘ἐἶναι’, and a predicate complement. Aristotle will argue that all other simple sentences having other verbs, of the form, ‘S P’s’ (‘ὅ S P’εἰ’), also have the logical form of a statement of *tertium adiacens*.

The grammatical structure of a simple statement of *tertium adiacens* has much the same features as an adjective directly modifying the subject or as a noun in apposition to the subject. As word order is not especially rigid in Greek sentences, sometimes it is hard to tell whether a sentence contains a predication of a predicate adjective of a subject term or is a statement about the present existence of something referred to by the subject term modified by that adjective. It may even be hard to tell apart a predication of a predicate nominative of a subject term from a statement about the present exis-

<sup>14</sup> *Greek Grammar*, p. 362 §1615. The passage is from Plato, *Protagoras* 311e.

<sup>15</sup> A fact recognized by Aristotle, *Prior Analytics* I.36. Cf. Alexander, in *An. Pr.* 359,22-3.

tence of something referred to by a subject term having a noun in apposition.<sup>16</sup>

To take a complex example, but one germane to the following discussion, consider again “ἔστιν οὐ λευκὸν ξύλον” (‘it is a not-white log’). [*An. Pr.* 51b28] This could be translated as ‘the log is not white’ or ‘there is a not-white log’ or, more freely, ‘there exists a non-white log’. In such cases it is hard to tell whether the verb, ‘is’ (ἔστιν) should be taken copulatively, to connect subject and predicate complement, or existentially, to make an existence claim about a subject complex.<sup>17</sup>

The extension of the aspect theory to statements having verbs other than forms of ‘be’ (εἶναι) has less obvious grammatical plausibility. Yet it is suggested by the equivalence of a verb to a participial construction linked to its subject by some form of ‘be’. Then the aspect theory would apply to all statements. At any rate, Aristotle will bring up this feature, and make this reduction: ‘walks’ may be rendered as ‘is walking’. [*Int.* 20a3-5]

Let me then summarize the results of my foray into Greek grammar. I conclude that the linguistic evidence of Greek usage does not favor decisively either the existential or the copulative view of ‘is’ in distinguishing the copulative from the existential use. The problem of confusing the syntactic and the semantic levels does favor a theory of a single, fused sense of ‘is’, though. Too, ‘is’ is a single word, perhaps differentiated or made ambiguous by its context. But this also supports a single, fused sense of ‘is’. Distinguishing the existential and the copulative uses seems to have been a later approach, motivated by logical and philosophical considerations. As the copulative theory of ‘is’ has some difficulties, even grammatical ones, we have some motivation to look at the alternative existential theory of ‘is’, and the corresponding aspect theory. However, we should bear in mind that the reduction of all simple statements of *secundum* and *tertium adiacens* to a statement containing ‘is’ concerns logical and not grammatical theory.

### *The Aspect Theory in Arabic*

Still, we may well be cautious about this aspect theory of predication, as a theory of Greek usage. For it was clearly proposed explicitly only much later, in Arabic, by logicians with quite different linguistic backgrounds. Moreover, the grammatical structure of an ‘S is P’ sentence in Arabic dif-

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<sup>16</sup> To be sure, these distinctions are made regularly in Greek grammar, but few rules are given on how to distinguish these different structures: e.g., ‘there is a rational animal’ and ‘an animal is rational’. See Herbert Smyth, *Greek Grammar*, pp. 256-7 §910-6.

<sup>17</sup> Cf. Christopher Kirwan, *Aristotle's Metaphysics: Books Γ, Δ, Ε*, First Edition, p. 145.

fers greatly from the Greek. I shall summarize the grammar of 'be' in Arabic. I shall then consider whether the aspect theory arises from a linguistic confusion, following upon translating Greek into Arabic, a non-Indo-European language.

In ordinary Arabic, a sentence of *tertium adiacens* would be expressed normally by a nominal sentence. In such a nominal sentence in Arabic, there is no verb, and the subject term is a noun in the nominative, with a definite article in the case of common nouns, while the predicate is a noun in the nominative of indefinite state, with no definite article.<sup>18</sup>

Alternatively, an 'S is P' sentence could be represented in Arabic by a verbal construction. Here 'is' would be represented by the verb '*kāna*', which means something like 'exists' or 'becomes'; indeed it seems closer to 'γίγνεται' than to 'ἐστίν'. In contrast to Greek, the predicate, in a verbal Arabic sentence with '*kāna*' serving as the verb, is in the accusative, and so could be taken to be in a construction of the accusative of respect. Thus W. Wright notes,

...the Arabic language, like the Hebrew and Syriac, has no *abstract* or *substantive* verb to unite the predicate with the subject of a nominal sentence, for '*kāna*' is not an abstract verb, but, like all other verbs, an attributive, ascribing to the subject the attribute of existence. Consequently its predicate is put, not in the nominative, but in the adverbial accusative.<sup>19</sup>

Only in a construction of apposition or of complex subject would all the nouns be in the nominative, as in 'there exists a dog', 'there exists a dog, a monster', 'there exists a yellow dog'.<sup>20</sup>

In Arabic, then, the existential character of a simple statement is quite clear and explicit, even in ordinary language use, more so than in Greek. That a statement makes an existential claim is clearer in a verbal sentence using '*kāna*' than in a nominal sentence. Philosophers like Al-Farabi and Avicenna generally preferred the verbal '*kāna*' construction to the nominal one, because the former construction makes it easier to talk about Aristotle's logical analysis about a statement of *tertium adiacens*.<sup>21</sup> The use of the verbal construction would incline the Islamic philosophers to the aspect theory of predication.

<sup>18</sup> Note that this is the standard traditional account of 'be' proposed by many Greek grammarians, although Kahn rejects it, "Retrospective on the Verb 'To Be'," p. 2.

<sup>19</sup> W. Wright, *A Grammar of the Arabic Language*, Vol. II, p. 258.

<sup>20</sup> Shukri Ahed, *Aristotelian Logic and the Arabic Language in Alfarabi*, pp. 105; 111-2, He notes, p. 121, how awkward the '*mawjūd*' construction is, e.g. "'Zayd exists tall'".

<sup>21</sup> Shukri Ahed, *Aristotelian Logic and the Arabic Language in Alfarabi*, notes, p. 129, that Alfarabi uses the '*huwa*' and '*mawjūd*' constructions identically.

Yet, even more, particularly when discussing Aristotelian logic, they preferred a construction not at all ordinary in Arabic but concocted for the sake of doing Greek, Aristotelian logic and philosophy. They self-consciously adopted a structure with *'mawjūd'*, a participle of *'wajada'*, which means 'to be present' or 'to exist'.<sup>22</sup> To say that S is or exists (ἔστιν S) is rendered either by the verbal *'kāna'* construction, namely as *'kāna al-S mawjūd'* or nominally by *'al-S mawjūd'*. The usual predicate in 'S is P' is then put into an accusative of respect, that specifies the existence further. (The possible implicit presence of *'kāna'* might occasion the accusative in the nominal sentence as well.) Hence we have the usual parsing of the aspect theory: S is existent as a P. So it would have been easy to take this grammatical structure to represent the logical structure of predication, and hence to embrace the aspect theory.<sup>23</sup>

These grammatical details point out great divergences in how Aristotelian Greek and Arabic philosophers and logicians would have had at least to formulate their thoughts. These differences may have given rise to an Arabic theory of predication that diverges far from the Greek original. The contrived Arabic construction favored by Al-Farabi and Avicenna suggests the aspect theory much more readily than the Greek: in particular the use of an accusative of respect does so. So then does the aspect theory have its origins in a linguistic mistake, of confusing grammatical with logical structure?

But these considerations do not suffice to relegate the aspect theory to grammatical anachronism and naïveté. For Al-Farabi, probably following Ammonius, does not hold the aspect theory, but instead says that in a statement of *tertium adiacens* the 'is' is merely copulative and not existential.<sup>24</sup> Again Avicenna, being a Persian, had Indo-European roots. He would have been well aware of alternatives to the aspect theory that he champions, on the logical as well as on the grammatical side, especially as Al-Farabi's writings influenced him so much. So we need not think that Aristotelian logicians were trapped by the grammar of ordinary language as in a house of mirrors. Still we should be cautious in reading the aspect theory back into Greek, if it be incongruous linguistically. But, so I have argued, it is not.

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<sup>22</sup> Cf. F. W. Zimmermann, *Al-Farabi's Commentary and Short Treatise on Aristotle's De Interpretatione*, pp. xliv-v; E. M. Goichon, *La distinction de l'essence et de l'existence d'après Avicenne*, pp. 14-5. In effect the *'mawjūd'* construction captures the sense of *'ὑπάρχει'*, which I shall discuss below.

<sup>23</sup> A. C. Graham, "'Being in Linguistics and Philosophy,'" p. 223, claims that some languages like Greek and Latin, have the same word perform the existential and the copulative functions, while others, like Arabic, sharply separate the two.

<sup>24</sup> Al-Farabi, *Al-Farabi's Commentary on Aristotle's Peri Hermeneias*, 105,15-6 [trans. Zimmermann, p. 101]. Ammonius, in *De Int.* 160,9-16.



*The Meaning of 'Be' in Greek*

Now I turn to considering directly the philological evidence for the admissibility of the aspect theory of predication in ancient Greek. Here I focus on whether 'be' can be taken to have the fundamental meaning of 'exists'.

Fortunately, there already exists a good deal of scholarship on the semantic structures of the verb 'to be' in ancient Greek, notably by Charles Kahn. I wish to show then in this section that the theory of predication that I am discussing does not conflict but, rather, is congenial to this material.

I have no need here to assess all the evidence Kahn et al. provides for his main thesis, that the primary use of 'ἔστιν' ('is') in ancient Greek is copulative and not existential.<sup>25</sup> He might even be right regarding ordinary Greek usage. After all, the vast majority of the uses of 'be' in the ancient Greek corpus is in sentences of *tertium adiacens*, and in such sentences the various forms of 'be' at the very least do link subject and predicate. Yet, even here, we may have doubts. For consider the expression, 'ἔστιν ὅτε' ('sometimes'): 'there is a [time] when' suggests itself as a literal translation. I find it hard to give a literal translation, if 'ἔστιν' is to be taken copulatively.

However, Kahn's claim that the basic use of 'is' is copulative and not existential might appear to rule out the aspect theory as possible grammatically. But does it actually do this? Above, I have suggested that the copulative theory has structural flaws as a grammatical theory, and that the existential theory has its attractions. The aspect theory, being a theory of the logical structure of predication, would then not be ruled out as grammatically absurd, if the existential theory for the grammar of 'is' be plausible, or, at least, not ungrammatical. Hence I shall consider whether the parsings suggested by the aspect theory can construe sentences in Greek.

To begin, let us suppose that the claim that the basic use of 'is' is copulative and not existential holds, in its strong form, for ancient Greek. Even so, every normal statement could still be making an existence claim. For, as Strawson notes, in ordinary conversation it is presupposed that you are talking about something that exists.<sup>26</sup> Thus, to introduce a name or make a claim about something already commits you to defending the further claim that it exists. Yet, at the same time, the statement does not make that existence claim explicitly, nor does the speaker intend to make it. Indeed it would be inappropriate: for consider 'Socrates is a philosopher, and Socrates exists'. The second conjunct in a statement whose first conjunct is one of *tertium adiacens* having the same subject as the second conjunct of se-

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<sup>25</sup> Charles Kahn, *The Verb 'Be' in Ancient Greek*, p. 388.

<sup>26</sup> P. F. Strawson, *Individuals*, pp. 192-3; "On Referring," pp. 12-3.

*cundum adiacens* seems not only superfluous but absurd. But the absurdity seems to come from the predication preceding the existence claim and containing it already, and not from the existence claim itself. But this could not occur if ‘Socrates is a philosopher’ makes only the copulative claim, that ‘philosopher’ is predicated of ‘Socrates’.

Again, consider ‘Zeus exists, and he loves you’. Perhaps this sentence is ill-formed logically, but it is an actual speech pattern, and so is grammatical. In sum, to say that the primary use of ‘is’ is copulative and not existential is misleading, in the sense that at the very least a purely copulative use seems to contain or presuppose an existential use. I would have to agree that, in terms of speaker meaning, a statement of *tertium adiacens* does not always make an existential claim explicitly. Instead, it has an existential presupposition normally. Yet that does not prevent a logical analysis of the semantic meaning of such statements, or a self-conscious, philosophical use of such statements, from making that implicit existential presupposition an explicit existential claim. Thus, even if the copulative theory prevails over the existential in Greek grammar, the aspect theory, of the logical structure of Greek sentences, is not ruled out.

Further, *contra* Kahn, it turns out that the fundamental meaning of εἶναι (‘be’) in its various forms for ordinary speakers in ancient Greek (and in Indo-European languages in general) may well be one of existence. Even Kahn admits that many linguists take the existential use to be the fundamental one in Indo-European.<sup>27</sup> On this view, ‘is’ signifies the concrete presence of the subject to the speaker and her audience.<sup>28</sup> So to assert that S is P is to assert that there is presently some thing, called or described by ‘S’, that is P, and that this thing is (potentially) a present object of experience for the speaker and the auditors. I can say, “I am hungry,” and here the subject ‘I’ refers to something that is a present object of experience to me and my audience; I can say, “Mt. Everest is tall,” and refer by the subject term to something that I am not now experiencing but could experience now. Similarly, a past tense, ‘was’, indicates that the subject was a possible object of experience, but, perhaps, is not any longer.

Indeed, this theory may be more plausible than Kahn’s. That the ‘is’ in a statement of *tertium adiacens* does more than copulate is suggested by certain features of accentuation patterns of sentences, that seem common to a good many Indo-European languages. In English, if I stress the ‘was’, in ‘George *was* kind’, I imply that George still exists, but is no longer kind; if I do not stress the ‘was’, I imply that George is dead and does not exist any more. Now we cannot test this claim in the “dead” languages of Greek and

<sup>27</sup> Charles Kahn, *The Verb ‘Be’ in Ancient Greek*, pp. 8; 377; 381-2.

<sup>28</sup> Charles Kahn, *The Verb ‘Be’ in Ancient Greek*, p. 373.

Latin. But note that ‘*Fuit, fuit*’ in Latin, where the stress is made by repetition, states that the person was but is no longer. So too in Greek, stress by putting the verb form of εἶναι first makes an existence claim the main concern: e.g., “οὐκ ἔσθ’ οὗτος ἀνὴρ” [*Od.* 16.437]; “ὁ οὐκ ὦν, οἱ οὐκ ὄντες” [*Thuc.* 2.44.45]; “ὡς ἄν εἶεν ἄνθρωποι” [*Symp.* 190c].

Since ‘is’ in statements of *secundum adiacens* clearly makes an existence claim, and also does so, it seems, at least implicitly, even in statements of *tertium adiacens*, it seems plausible that the basic sense of ‘is’ in Indo-European is existential in the sense of concrete presence. Even if, as Kahn claims, this existential theory is not correct, still many scholars have held it. So it does not seem remiss for me to conclude that the aspect theory of predication accords with general Greek usage. It might not be the best theory, but, I need only claim, it might be a logical theory that a Greek like Aristotle might have considered and held, without linguistic absurdity.

Note that the aspect theory of predication has the advantage that it does not take the copulative and the existential readings to belong to different logical types: a sentence is not either copulative or existential; this is a false dilemma. There is but a single sentential logical structure here, which can be expressed in different grammatical structures. We may call these structures copulative or existential. But the Greek has but a single word, and, perhaps, a single logical structure. As Kahn and his opponents all agree, the Greek philosophers, at least, saw enough unity to move between these various senses of ‘be’—copulative; veridical; existential; locative...—rapidly, without necessarily occasioning ambiguity. So let us not impose too much distinctness on these uses.

In any case, we are considering not merely philosophical Greek usage but philosophical Greek usage by Aristotle in particular, as well as Aristotle’s theory about that! Once we move from ordinary Greek usage to the philosophical usage, even Kahn implies that the existential use might become the central, fundamental one. He claims that the post-Homeric philosophers had developed a new, abstract existential use of ‘is’, in which the very existence of the subject is questioned.<sup>29</sup> In this sense they worry about what is and what is not (ἔστι καὶ οὐκ ἔστιν), and about being and not-being (τὸ ὄν καὶ τὸ μὴ ὄν). Here the philosophers may have distorted ordinary usage, and enlarged the boundaries of their language. At the least, even if the existential use is not the basic one of ‘is’ in ordinary Greek, surely the

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<sup>29</sup> Charles Kahn, *The Verb ‘Be’ in Ancient Greek*, p. 297. Kahn has some other versions of this view; e.g., early on he held that the primary use of ‘is’ by such philosophers as Parmenides is veridical: ‘is’ is to be construed as ‘it is the case’. See “The Greek Verb ‘To Be’ and the Concept of Being,” p. 147; “Some Philosophical Uses of ‘Be’ in Plato,” p. 106; “Retrospective on the Verb ‘To Be’ and the Concept of Being,” p. 9.

philosophers magnify its importance to far more than it had ordinarily. For surely Parmenides does concentrate on 'is' and enlarge its significance. For his two options are 'is' and 'is not'.

Indeed, a consensus has emerged that Parmenides uses 'is' in a way that fuses the various senses of 'is'. His 'is' is to be taken in the strong sense of "is what it is to be".<sup>30</sup> "Parmenides'  $\epsilon\sigma\tau\iota$  is predicational in a particularly strong sense, for it is used to make a claim about the essence or reality of a thing."<sup>31</sup> Parmenides assumes that the structure of language and the structure of the world are the same, and that 'is' has a single use.<sup>32</sup> As Mourelatos says,

there is ultimately only one use of 'is', the one that makes direct contact with reality...Neither fully a predicative copula nor a marker of identity, this 'is' might be called the 'is' of introduction and recognition, since it has its paradigm...in acquaintance.<sup>33</sup>

So too Pelletier holds that Parmenides has a fused sense of 'is':

The fused sense of ' $\epsilon\sigma\tau\iota\nu$ ' is supposed to encompass the sense of 'is' which means "exists", the sense in which it introduces a predicative expression (i.e., as a copula), and a sense which means "is true." What English word shall we use for this fused sense of ' $\epsilon\sigma\tau\iota\nu$ '? One possibility is simply to use "is"...Alternatively we might use 'exists' for the "fused" sense; in this case we would say 'Theaetetus exists' and 'Sitting Theaetetus exists'.<sup>34</sup>

In the next chapter, I shall point out briefly how what Parmenides says does fit such a conception of 'is'. Indeed, Plato and Aristotle et al. read him thus, and, I shall claim, followed him in having a single usage for 'is'.

Kahn holds that, as the Greek philosophical tradition developed, the main use of 'be' shifted from the copulative to the veridical or alethic use:

<sup>30</sup> G. S. Kirk J. E. Raven and M. Schofield, *The Presocratic Philosophers*, Second Edition, p. 24, hold that Parmenides' 'is' is "simultaneously existential and predicative." Cf. Alexander Nehemas, "Self-Predication and Plato's Theory of Forms," p. 102.

<sup>31</sup> Patricia Kenig Curd, "Deception and Belief in Parmenides' Doxa," p. 123.

<sup>32</sup> A. P. D. Mourelatos, "Heraclitus, Parmenides, and the Naïve Metaphysics of Things," pp. 16-48; Patricia Kenig Curd, "Knowledge and Unity in Heraclitus," p. 532.

<sup>33</sup> A. P. D. Mourelatos, "Heraclitus, Parmenides, and the Naïve Metaphysics of Things," p. 20. However, in *The Route of Parmenides*, p. 47, Mourelatos holds that it is a mistake to take ' $\epsilon\sigma\tau\iota$ ' to "have existential force." He argues, p. 54, "If we assume a confusion of the 'is' of copulative predication with the 'is' of existence, Parmenides' argument again becomes too easy." (Also cf. p. 274.) Instead, Mourelatos, pp. 57-9, advocates a speculative 'is', as in 'what it is to be some thing'.

<sup>34</sup> Francis Jeffrey Pelletier, *Parmenides, Plato, and the Semantics of Not-Being*, p. 20. See too M. Matthen, "Greek Ontology and the 'is' of Truth," pp. 113-35. However Matthen, p. 121, tends toward a basic predicative 'is'.

'is true' or 'is so'.<sup>35</sup> He quotes as an example Protagoras' *dictum*: "Man is the measure of all things, of the things that are (*τῶν ὄντων*), that they are (*ὡς ἔστιν*), and of the things that are not, that they are not."<sup>36</sup> But note how awkward the English is in a veridical translation. Why not read it as "of beings, how they exist"?

Again, Plato speaks about what both is and is not. [*Resp* V 478D; 479D; cf. *Soph.*] It is hard to take these uses of 'is' veridically.<sup>37</sup> Some like Dancy want to understand this claim not to assert that perceptible individuals both exist and do not exist, but that they both are and are not what they are; e.g., that Helen is and is not beautiful.<sup>38</sup> But, as Plato relegates individuals to a shadowy sort of imperfect existence, surely he is implying too that these individuals are not real and existent in the full sense. On my view, that they are and are not can be read in both ways: they both exist and do not exist, in different respects, and do not have their attributes perfectly.

Note too that Kahn observes that this veridical sense easily converts into both the existential and the copulative uses.<sup>39</sup> We might then reverse the conversion relations, and hold that the existential can convert easily into the copulative and the veridical, as I shall discuss in Chapter Three.

Aristotle also gives excellent grounds for inferring that he too has both magnified the importance of 'is' and has taken 'is' in a single sense, and that he explicitly recognizes and advocates doing this, when he claims that the fundamental form of the proposition is: 'is—is not'. [*Int.* 19b15-6]<sup>40</sup> Indeed, G. E. L. Owen claims that Aristotle confines himself largely to the existential sense of 'be'.<sup>41</sup>

Finally, even Kahn's own candidate for the fundamental sense of 'is' in ancient Greek does not differ too much from the aspect theory. He claims that, although the basic use is copulative, the most central such use is the

<sup>35</sup> Charles Kahn, "Some Philosophical Uses of 'Be' in Plato," p. 106; "Retrospective on the Verb 'To Be' and the Concept of Being," p. 12; "Why Existence Does Not Emerge as a Distinctive Concept in Greek Philosophy," p. 323.

<sup>36</sup> Protagoras, Fr. 1. Charles Kahn, "Retrospective on the Verb 'To Be'," p. 13.

<sup>37</sup> Lesley Brown, "The Verb 'To Be' in Greek Philosophy: Some Remarks," p. 218-9.

<sup>38</sup> Cf. R. M. Dancy, "Aristotle and Existence," p. 51.

<sup>39</sup> "Why Existence Does Not Emerge as a Distinctive Concept in Greek Philosophy," p. 329.

<sup>40</sup> Étienne Gilson, *L'Être et l'essence*, pp. 277-8, takes Aristotle's remark that 'is' and 'is not' by itself to mean that it "ne présente pas de signification rapportant à Socrate." Gilson seems to take this passage to deny that 'is' can have any signification or use outside of being a copula: "Hors de cette fonction d'affirmation il n'a pas de sens." Gilson may be arguing for a decent theory of predication, but, I claim, it is not Aristotle's.

<sup>41</sup> G. E. L. Owen, "Aristotle on the Snares of Ontology," pp. 271-2.

locative copulative: 'there S stands'.<sup>42</sup> The copula connects the subject term and an expression of location. At this point, we may wonder just how the locative copulative differs from an existential use. For the claim of existence made by 'is' according to the aspect theory amounts to the same thing but simply makes the fundamental use less specific: 'S is'; 'S is out there somewhere', to be an object of possible experience. Here, 'is' is taken to signify 'Lo' or '!': 'S is', i.e., 'Lo S is!', rather like the '!' in 'Slab!' in Wittgenstein's slab game. Perhaps Kahn means only that the type of existential use described as locative copulative is not the type of the existential quantifier (' $\exists x$ ') but that of presence ('E!'). As I have noted, making such fine distinctions might be both anachronistic and undesirable. In any case, one might wonder whether there is much difference in these two analyses, of the existential and the locative copulative.

One difference between the two may lie in the copulative 'is' providing a way to give unity to the subject and verb so as to make a statement, whereas the existential 'is' does not do this at all. This difference in effect amounts to a rejection of there being an existential use of 'is' at all. Thus Gilson argues against an existential analysis of 'be' through there then being no way for that existential function to be connected to the subject.<sup>43</sup> If 'is' meant 'present', how to connect it to the subject? If 'S is' meant something like 'S is present', then 'is', taken existentially, does the double duty of asserting the predicate of existence and connecting it up.

Such objections may have merit. Yet they do not show 1) that Aristotle did not have an existential view of the copula, nor 2) that such a view would be impossible grammatically in Greek. (1) For why is it impossible for a single word to have two logical or semantic functions? Even a word like 'but' indicates both a conjunction and the observation that there is supposed to be an element of contrast between the conjuncts. So that 'is' performs a multiplicity of functions does not generate linguistic absurdities. In any case, the locative copulative reading faces the same objection: for in 'Lo, a white cow!', 'white' and 'cow' both signify something real, and at the same time somehow hook up together, in a way that 'white big' and 'animal cow' do not. [Cf. *Int.* Ch. 11]

Nor (2) does that feature ensure that the aspect theory cannot be Aristotle's theory of predication. For Aristotle himself acts similarly in seeking

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<sup>42</sup> Charles Kahn, *The Verb 'Be' in Ancient Greek*, pp. 224-5; 388. Later, in "Why Existence Does Not Emerge as a Distinct Concept in Greek Philosophy," p. 12, Kahn takes the fundamental use of 'be' to be the veridical: it asserts the presence of a truth-maker or something real in the world, p. 15. Still, once more, this notion of presence is congenial to the aspect theory

<sup>43</sup> So Étienne Gilson, *L'Être et L'essence*, pp. 266-7.

to reduce other verbs like 'walks' to 'is' plus a participle, 'walking'. So Aristotle himself takes other verbs do a double duty: to provide both a copula and a predicate to be copulated. So why not similarly for 'is', at least in those cases, of *secundum adiacens* where it must also provide a predicate? Indeed, as I have noted and shall discuss further in the next chapter, all statements, even those of *tertium adiacens*, may well make existential assertions of a unified complex. Thus, 'the log is white' ('S is P') becomes 'there is a white log' ('S-P is').<sup>44</sup> Here the complex subject has the unity of noun and adjective. Those like Bradley may challenge this unity, but still it has *prima facie* appeal.

Therefore we have no insurmountable objections against an existential basic use of 'is', at least for Aristotle's theory of predication in ancient Greek.<sup>45</sup> It has its weaknesses but also its strengths. Indeed, Kahn admits that the locative-copula approach is somewhat strained in being applied to cases like 'Socrates is wise', and has to make a similar generalization of location: "Socrates stands in the condition of being wise".<sup>46</sup> Further in the aspect theory, the analysis of 'S is P' as 'S is existent as a P' closely resembles Kahn's locative appositional uses: there lies S, being a P.<sup>47</sup>

Consequently I can find no compelling reason why the aspect theory of predication does not agree with the usage of ancient Greek, particularly its use by philosophers like Aristotle.<sup>48</sup> Even if Kahn is right in holding that the fundamental use of 'be' in Greek is copulative, or veridical for the philosopher, his results do not conflict with the assertion that in Aristotle's philosophy the existential use was assumed as a foundation for the copulative (and veridical). Indeed, Kahn admits that Aristotle is a special, com-

<sup>44</sup> Cf. the view of John Cook Wilson, *Statement and Inference*, Vol. 1, p. 126, on 'Jones is a bad rower': here 'Jones' and 'bad rower' form a complex subject, and 'is' is the predicate.

<sup>45</sup> Lesley Brown, "The Verb 'To Be' in Greek Philosophy: Some Remarks," pp. 224-6; 236, rejects an existential interpretation. He urges instead a reading of 'is' on the lines of an incomplete and a more complete sense of the verb as with 'teaches' and 'teaches biology'. Brown's complaint, I think, lies more with an existential reading on the lines of the existential quantifier and not mine, of "real presence with hooks". So I see not much disagreement between us.

<sup>46</sup> Charles Kahn, *The Verb 'Be' in Ancient Greek*, p. 377.

<sup>47</sup> Charles Kahn, *The Verb 'Be' in Ancient Greek*, pp. 199-202. Notice that Kahn finds these uses derivative, just as Aristotle says about the tripartite vis à vis the bipartite proposition

<sup>48</sup> Christopher Kirwan, *Aristotle's Metaphysics: Books Γ, Δ, E*, First Edition, p. 214, protests that "the English verb 'exists' *must* be said baldly—it admits no complement, but there is no evidence that Aristotle, or any other ancient Greek that I know of, perceived a sense of the verb 'einai' in which it must be said baldly." He admits that the Greek 'be' does get used by itself, but says that, since it always admits a complement, it cannot mean the same as 'exist'. What I have said agrees with Kirwan, except that I am perhaps straining *English* usage: existence with hooks.

plex case, and seems at times to be verging on treating ‘is’ merely existentially.<sup>49</sup> Kahn insists only that Aristotle does not isolate existence as “a separate topic”, as “a central and implicit theme” of his philosophy. Rather Aristotle assumes and starts from the reality of the world. I can concede all that and still maintain the aspect theory. Indeed, Aristotle does not discuss questions like existential import much. However, he does, as I have noted, start his discussion of predication upon the foundation of the existential use of ‘be’, and his remarks on predication do agree with the aspect theory, as I shall urge.

### *The Aspect Theory in Greek*

So I claim that the basic sense of ‘be’ in Greek, if not in ordinary Greek yet in the Greek of philosophers like Aristotle, is existential. As Knuutilla and Hintikka note, recent scholars like Charles Kahn and Michael Frede have argued that it is anachronistic to insist that ancient philosophers like Plato and Aristotle distinguished the ‘is’ of predication from the ‘is’ of existence.<sup>50</sup> Kahn’s move was to take the copulative use, or some species of it, as basic in Greek; my move is to take the existential use as basic, at least in philosophical Greek. So I have found Kahn’s “Copernican Revolution, to reinstate the copulative at the center of the system of uses of εἶναι” misplaced.<sup>51</sup> For the copulative use has long held central place in traditional Aristotelian logic. Rather, I shall reinstate the existential, a use which many grammarians find more fundamental anyway.

How to choose between the two views without begging the question? One motivation lies in an asymmetry in Greek sentences like ‘ἔστιν οὐ λευκὸν ξύλον’, which, as noted above, can be translated copulatively (‘the log is not white’) or existentially (‘there is not a white log’; ‘there is a log that is not white’). The aspect theory has the advantage of not making

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<sup>49</sup> Charles Kahn, “Why Existence Does Not Emerge as a Distinct Concept in Greek Philosophy,” p. 15. Kahn speculates that it was only in Islamic philosophy that the notion of existence assumed the central position in questions of being.

At times one might wonder how for Kahn the existential use differs from the locative copulative, or even the veridical (taken as asserting a fact about the world). The basic differences seems to lie in the negative uses: in the copulative and veridical, the subject is still presented as being there, even in a negation. The usual denial concerns whether or not the predicate truly applies to the subject. In contrast, in the existential, the negation will tend to deny the very presence of the subject. In Kahn’s support is the reluctance of Greek philosophers, including Aristotle, to talk about what is not without qualification: surely, they say, our assertions must concern some thing that is, at least in some way.

<sup>50</sup> Simo Knuutilla and Jaakko Hintikka, “Introduction [to *The Logic of Being*],” pp. ix-x.

<sup>51</sup> Charles Kahn, “Retrospective on the Verb ‘To Be’,” p. 3.



much of this difference. According to it, there is no need to choose. For the two choices represent a false dilemma. There is but a single choice and a single sentential structure here, which can be expressed and translated into various grammatical constructions. *We* may call these copulative or existential. But the Greek has but a single word. As Kahn et al. all agree, the Greek philosophers saw enough unity to move between the various uses of ‘be’ that *we* may distinguish.

So, regardless of what might be the correct linguistic analysis of ‘is’ in ancient Greek, it is not ill-formed to attribute to Aristotle existence, in the sense of being there as present in the world, as his fundamental notion of being and predication.<sup>52</sup> I conclude then that the aspect theory satisfies this necessary condition of being linguistically appropriate.

Someone might wonder if the aspect theory can provide an account for all the various ways in which ‘εἶναι’ may be used in Greek. Kahn’s explanations of how to subsume such uses as the possessive, the vital, the veridical, and the potential do well here.<sup>53</sup> For my project it is more relevant to ascertain whether Aristotle’s remarks about such uses accord with the aspect theory. After reviewing the philosophical background of Aristotle’s theory, I shall proceed to a discussion of Aristotle’s remarks on some of these uses of ‘be’.

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<sup>52</sup> Indeed, Thomas Upton, in a critique of Owen’s article, attributes what is in effect the aspect theory to Aristotle: “Aristotle on Existence: Escaping the Snares of Ontology”, pp. 377; 387. As Upton is working from Aquinas’ theory of predication, it may be that his original inspiration lies in the Islamic material, and not in his pure reading of Aristotle.

<sup>53</sup> Charles Kahn, *The Verb ‘Be’ in Ancient Greek*, pp. 228; 233; 265; 293 310-1; 332-3.

## CHAPTER TWO

### ARISTOTLE'S PRECURSORS

Here I shall present the immediate background in Greek philosophy for Aristotle's theory of predication. As should become evident from Aristotle's texts themselves, Aristotle derives much of his doctrine about predication and the statement through developing and emending Plato's response to the Eleatic attack on pluralism. Parmenides argued that all are one through considering what statements purportedly about objects claim and imply. He argued that the assertion of any pluralism results in contradiction. In the *Sophist* Plato attacks Parmenides, and claims that it is consistent to speak of what is not and to apply many descriptions, both positive and negative, to the same subject. In doing so, Plato develops a theory of the statement (λόγος). He distinguishes names and verbs, and considers how the two may interweave and combine to make a single statement. Aristotle also attacks Parmenides' arguments, mainly in *Physics* I. He accuses Parmenides of eristic. Thus he criticizes both the truth of the Eleatic premises, and the validity of the arguments. Moreover, mostly in *On Interpretation*, Aristotle develops Plato's theory of the statement, begun in the *Sophist*.

I do not intend to survey the entire background of theories of predication before Aristotle. Nor do I wish to deal exhaustively with the texts and issues that I shall be citing. I wish only to sketch the background for Aristotle's own views, and to emphasize features that will have importance for understanding Aristotle's own views. In the process I shall make some suggestions on how to understand views of Parmenides and Plato. My main theses on predication do not depend on these suggestions.

I shall begin with a brief discussion of Parmenides and his use of 'is' and 'is not'. I then shall proceed to Plato's response in the *Sophist*. I shall end with Aristotle's discussion of Eleatic monism. I shall deal with Aristotle's own view of the statement in Chapter Four.

#### *Parmenides: Is or Is Not*

Surely Parmenides' *dictum*, "Is or Is not" [Fr. 8.16], by itself suggests a theory of predication, where every affirmative statement contains the basic assertion of 'is', and where the basic assertion of 'is' makes a claim of real presence or existence. For Parmenides uses a bare 'is', with no further

predicative determination, to describe the way of truth, what can be said and thought. Interpretations of his use of this bare ‘is’ vary.<sup>1</sup> Regardless of which reading is adopted, I find it clear that an affirmation containing ‘is’ for Parmenides carries with it a claim of existence and reality.<sup>2</sup> I find it even clearer that Parmenides construes a denial to imply a claim of non-existence and unreality: to say that something “is not” is to deny it reality. Parmenides says,

...the only ways of enquiry that are to be thought of. The one, that [it] is (ἡ μὲν ὅπως ἔστιν) and that it is impossible for [it] not to be...the other, that [it] is not (ἡ δ’ ὡς οὐκ ἔστιν) and that it is needful that it need not be... [Fr. 2.2-5]<sup>3</sup>

What is there to be said and thought must needs be: for it is there for being, but nothing is not. [Fr. 6.1-2]<sup>4</sup> [literal: To say and to think must remain being. For it is to be, while nothing is not.]

It never was nor will be, since it is now, all together, one, continuous. For what birth will you seek for it? How and whence did it grow? I shall not allow you to say nor to think from not being: for it is not to be said that it is not. [Fr. 8.5-9]<sup>5</sup>

Parmenides thus opposes ‘is’ or ‘being’ to ‘is not’ or ‘not being’. He reduces all statements to the bare ‘is’ structure. Through his analysis of this structure of ‘is’, he comes to conclusions about what there can be, about what can exist in reality.

Note that Parmenides describes the Way of “is” as “is somehow” (‘ὅπως ἔστιν’. [Fr.4.3]) It is tempting to construe “is somehow” to indicate that Parmenides is presenting an aspect theory: a statement asserts existence and

<sup>1</sup> Indeed, there are at least as many interpretations as candidates for the base meaning for ‘be’ in ancient Greek: the existential, the predicative, the veridical, and a “fused” sense. For a survey of the literature, see Patricia Curd, “Parmenidean Monism,” n. 11.

<sup>2</sup> That is, a statement containing ‘is’ *asserts* or *implies* or *presupposes* the claim that the subject exists. I leave it open which relation between the statement and the existence claim holds, although I have sympathy for a fused ‘is’, as I have attributed that to Greek usage in general. Indeed, I shall also attribute that to Plato and Aristotle. Still, many have argued for a fused ‘is’. Cf. Montgomery Furth, “A Philosophical Hero?,” p. 103; Francis Pelletier, *Parmenides, Plato, and the Semantics of Not-Being*, pp. 19-21.

<sup>3</sup> Translation in *The Presocratic Philosophers*, Second Edition, G. S. Kirk, J. E. Raven, & M. Schofield, p. 245.

<sup>4</sup> Translation in *The Presocratic Philosophers*, Second Edition, G. S. Kirk, J. E. Raven, & M. Schofield, p. 247.

<sup>5</sup> Translation in *The Presocratic Philosophers*, Second Edition, G. S. Kirk, J. E. Raven, & M. Schofield, p. 249.

then goes on to specify how, to specify what sort of existence.<sup>6</sup> On this reading, Parmenides would be asserting some sort of aspect theory for 'is'.<sup>7</sup>

In any case, Parmenides emphasizes 'is'. He takes the 'is' of a statement as central and as asserting the reality and existence of its subject. So an affirmation, containing a statement of 'is', 'S is' or 'S is P', implies that S exists.

In contrast, a denial, 'S is not', implies that S does not exist. From this implication, Parmenides derives a contradiction. Perhaps Parmenides assumes that every statement, negative as well as positive, asserts that its subject exists. At the least, Parmenides must hold that, given that S is being talked about, negatively or positively, S must be supposed to exist. Then 'S is not' implies both that S exists and S does not exist. Hence, Parmenides rejects the intelligibility of saying 'S is not', i.e., that S does not exist, for "such a way is unthinkable and nameless". [Fr. 8.17] Moreover, as I shall explain further below, Parmenides takes most, if not all, denials of *tertium adiacens*, 'S is not P', to imply that S is not. Thus such statements as well would imply this same contradiction.

So, first, in arguing for the reality of "is" and the unreality of "is not", Parmenides asserts that all statements, be they affirmations or denials, require existential import for their subjects (with the possible exception of certain statements of *tertium adiacens* to be discussed below).

Second, Parmenides clearly rejects, "Is not", i.e., 'what is not' or 'not being', as having any sort of existence or reality. From this rejection, he derives the unreality of all types of plurality, including time, change, and place. For to be at one time is *not to be* at another. And, from this statement of "Is Not", Parmenides concludes the impossibility of plurality.

What, then, does Parmenides conclude "Is"? On the usual interpretation, Parmenides would be allowing there to be only a single subject, and so holds a form of ontological monism. Thus Parmenides would hold that only the One, or Reality, exists, or, better, to avoid plurality, there is only "Is" or "Being". However, A. P. D. Mourelatos, Alexander Nehemas, and Patricia Curd, among others, argue that Parmenides holds a predicational monism, and allows a plurality of subjects but only a single predicate for each subject.<sup>8</sup> On this view, Parmenides would be allowing many subjects,

<sup>6</sup> But the parallel of 'ὅπως' with 'ὥς' goes against this reading. Yet cf. Fr. 8.47.

<sup>7</sup> A. P. D. Mourelatos, *The Route of Parmenides*, pp. 49-51, favors this interpretation as a nuance, and I agree. However I disagree with his claim that taking 'ὅπως' adverbially thus rules out an existential reading of 'is' (in my sense).

<sup>8</sup> A. P. D. Mourelatos, "Alternatives in Interpreting Parmenides;" Alexander Nehemas, "Self-Predication and Plato's Theory of Ideas," pp. 97-9; Patricia Curd, "Parmenidean Monism;" *The Legacy of Parmenides*. Jonathan Barnes, "Parmenides and the Eleatic One," pp. 19-20, has a slightly different view: Parmenides is arguing, Barnes says, thus: if something is

even the many things of ordinary experience: planets, Xanthippe, Socrates. But he would require that each subject have only a single predicate, strictly speaking: 'is', or 'is itself'. This view has the attraction that then Parmenides can go on to speak, without contradiction about the Way of mortal belief, which presupposes plurality. Parmenides then would be advocating a kind of atomism, wherein each thing is itself only.

Nevertheless, the interpretation of predicational monism has its problems. Parmenides does seem to make different predications about what is, e.g., in Fr. 8.3-4, that "being uncreated and imperishable it is, whole and of a single kind and unshaken and perfect." He also makes many negative statements about what is, e.g., that it neither was nor will be. Accordingly the classical tradition itself viewed Parmenides to advocate an ontological monism.<sup>9</sup>

On the other hand, friends of predicational monism might reply that most (all?) of the predications about what is made by Parmenides are negative: 'uncreated'; 'imperishable'; or can be parsed thus: 'not of many kinds'. In this way, Parmenides may be making only a single predication of being: "is", where the lack of subject again stresses the absence of plurality.<sup>10</sup> The other, apparent predications are, rather, the conclusions of indirect proofs that take as assumptions to be refuted assertions of plurality.<sup>11</sup> Parmenides does not mean these conclusions to be taken as making predications. Rather, he is merely denying that these other predications can be said or thought.

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an object of inquiry then it is or is not. (The problems that I raise below about 'is' in 'just what it is' (*ὅπερ ὅν*) will apply to the antecedent of this statement.)

<sup>9</sup> Given the reflection of thought and reality assumed in most Greek thought, I find it likely that the distinction of the predicational and the ontological is anachronistic. Note too that an ontological monist can be a predicational monist too. A. P. D. Mourelatos, *The Route of Parmenides*, p. 150, agrees that Plato and Aristotle take Parmenides to hold an ontological monism, but holds them to be too influenced by later developments. Instead he wants, p. 155, Parmenides to be a non-dualist.

<sup>10</sup> G. E. L. Owen, "Eleatic Questions," pp. 10-1, and A. P. D. Mourelatos, *The Route of Parmenides*, pp. 53; 55-6, et al. argue for a subjectless 'is'. Owen, p. 16, remarks that the subject of 'ἐστίν' here is what can be talked about, and that "this is quite formal until it is filled in with the attributes (beginning with existence) that are deduced for it."

<sup>11</sup> David Furley, "Notes on Parmenides," p. 9, takes this approach. He notes that Parmenides has 'ἐστίν' as a premise, and offers a refutation of the remaining options, to conclude "λείπεται ὡς ἔστιν".

Indeed, *Sophist* 251b-c supports the view that Plato holds Parmenides to hold a predicational monism, but does not rule out an ontological monism as well. Against the view of predicational monism, cf. 242d, where the Stranger describes the Eleatics as holding that 'those that are called many are one.' See too A. P. D. Mourelatos, *The Route of Parmenides*, p. 53.

In any case, I can derive a third conclusion without deciding what kind of monism Parmenides holds. At the least, Parmenides does allow for true statements about what is, both of affirmative and negative grammatical—if not logical—form. First, he does say that what is is one, continuous, etc. Hence he uses affirmative statements. Moreover, he also uses at least certain forms of negative statements: he does say that what is “is not divisible” [Fr. 8.22] and “will not be”. [Fr. 8.5] So is he saying “what is not”? Maybe, instead, he is construing these denials as suggested above, sc., as rejecting certain ways of speaking altogether. Or, perhaps, Parmenides sees such denials to belong to a special type of affirmation, where (if I may import some later Aristotelian terms) the predicate consists of ‘is’ plus a privative term (e.g., “ungenerated” [Fr. 8.3] or a simple denial (“will not be”; “is not divisible”, “is not deficient” [Fr. 8.33])). Or, some of the simple denials might be metathetic predicates instead. On all these readings, it seems, on pain of being contradicted by his own argument, Parmenides holds that these negative statements can somehow be true assertions about what is, without asserting that it is not. Perhaps Parmenides views these grammatically negative statements to be “assertions”, but not “genuine” assertions, on account of their being negative, nor genuine negations, as they make no predication of the subject and do not require the existence of the subject.<sup>12</sup> After all, he does speak of the “mere names that mortals have laid down.” [Fr. 8.38-9]

Still why should we not take these negative statements as well formed, logical affirmations? For they came about as the conclusions of his own indirect proofs. Does he not take them to be true? In any case, if Parmenides does allow negative statements, he would require them to have existent subjects: as for the purported subjects that “are not”, these are unable to be named or thought. [Fr. 8.17]

So Parmenides takes negative predicates to affirm the existence of their subjects.<sup>13</sup> In brief, I suggest, Parmenides takes the metathetic affirmation as the standard reading of the denial: ‘S is not P’ as ‘S is not-P’ (‘S is existent as not-P’ on the aspect reading). We shall see Plato and Aristotle, while modifying this view somewhat, treating denials in like fashion.

We may draw one final conclusion from how Parmenides needs to extend his conclusions about the impossibility of not being to the impossibility of different things’ having different attributes. For, *prima facie*, what is

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<sup>12</sup> Similarly, Nagarjuna prefers being called non-pluralist to monist: “neither this nor that”.

<sup>13</sup> As Anne and Owen Smith have noted, then on my view it follows that ‘what is not is not’ (or: ‘not being is not’) is false for Parmenides. But this result seems to be Parmenides’ problem and not mine, if ‘is not’ cannot be thought nor said. [Fr. 2.7-8]

contradictory about such statements as 'the log is white' and 'Socrates is not Plato'? Parmenides has somehow to construe such statements to be claims about what is not, so that his general argument on 'is not' might apply. He does so by claiming that all statements of *tertium adiacens* ('S is P') also make an existence claim ('S is').

Parmenides eliminates plurality by claiming it to be self-contradictory: for there to be two things, Socrates and Plato, one must differ from the other, and so not be the other. Likewise, for 'the log is white' to be true, its contrary statements, like 'the log is black' and 'the log is green', as well as its denial, 'the log is not white' must be false. From these denials, which are implied by common affirmative and negative statements about ordinary objects, Parmenides wants to derive a statement of not being, a contradiction that what is is not, or that what is not is.

One common interpretation, which Aristotle himself seems to take and whose validity he critiques (e.g., in the fallacy of *secundum quid ad simpliciter*), has Parmenides making the inference from 'S is not P' to 'S is not'. E.g., since Socrates is not Plato, Socrates is not; since the log is not black, the log is not. Likewise, 'the goat-stag is a figment of the imagination; hence the goat-stag, what is not, is'. [*Soph. El.* 167a1-4; *Int.* 21a25-33] On this interpretation, Parmenides would be assuming that every affirmation contains and implies an assertion of existence, and every denial a denial of existence.

On another interpretation, Parmenides takes the general strategy of making the subject ('S') and the predicate ('P' in 'S is P') form a complex, which is then asserted to exist: 'S is P' is rendered as 'S-P is'; 'S is not P' as 'S-P is not'.<sup>14</sup> Then 'Socrates is not Plato' claims 'that Socrates is Plato does not exist'. Again, 'the log is white' implies that the log is not black. But then, once more, it is being asserted, 'the black log does not exist' and 'that the log is not white (or: the not-white log) does not exist'. Here too Parmenides would be reading a statement to make an assertion or denial of existence, as the aspect theory requires. But 'P' would be attached instead to the subject to form a complex, instead of specifying further how S exists, by adverbial attachment. This interpretation also has some plausibility, as I have discussed in the previous chapter. Too we shall see that Aristotle may be using similar sentential structures.

On either interpretation, Parmenides does assume that every statement makes a assertion of being or real existence, while every denial makes an assertion of non-being or non-existence. Hence any subject for which genuine denials hold cannot exist, for any such denial will imply that its sub-

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<sup>14</sup> Francis J. Pelletier, *Parmenides, Plato, and the Semantics of Not Being*, p. 13. In Chapter One I have noted that both of these renderings are possible grammatically.

ject both is and is not.<sup>15</sup> Instead we must take grammatical denials meta-thetically ('S is not-P') so as to make an affirmation. But, as every statement containing a determinate subject has some definite attributes and does not have others, even (ordinary) affirmations will imply denials, and so will assert both "is and is not". Hence monism rules.

We shall see later philosophers like Plato and Aristotle keeping to this approach, while challenging other features of Parmenides' position. On account of the obscurity and brevity of the fragments, it is hard to tell whether Parmenides holds a statement to affirm existence and then to allow that existence be determined further ('S exists as a P'), or whether he takes all statements to be of *secundum adiacens*, possibly with an additional predicate to be added onto the subject ('S-P exists'). But it does not matter much: both of these options in effect describe an aspect theory, where 'is' makes an existence claim, and the subject gets specified further.<sup>16</sup>

### *Plato: Not Being Is*

Plato accepts much of the Eleatic approach. He too assumes that what is not, in any respect, has no place in our speech or thought. He also seems to grant that, when a subject has a negative predication, it is a "not being": 'S is not P' implies 'S is not'.<sup>17</sup> He then proposes a way in which not being has being, that is, a way in which certain negative statements can make positive existence claims without contradiction—as, perhaps, Parmenides himself had done already.

Accordingly, the Eleatic Stranger asserts that motion really is not being and really is being [*Soph.* 256d8-9]: motion is not being, since it is other than being, and it is being, since it participates in being. [256a1] The Stranger, presumably Plato, wants to block the claim that 'motion is being and is not being' is a contradiction. He does so by introducing a view of not being, according to which not being may be being and exist. But this looks hard to do. For, the Stranger admits, to say that motion really is being is to say that there is motion, i.e., that motion exists. [250a11-2] But then,

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<sup>15</sup> As already noted in the previous chapter, on the aspect theory, these two interpretations turn out to be mere grammatical variants of a basic assertion of existence, with or without further determinants.

<sup>16</sup> The complex subject approach ('S-P') does lead to a complex ontology; the other approach has the merit of limiting the domain of logical subjects, ultimately, for Aristotle, to primary substances.

<sup>17</sup> Most of the time in my schematization of 'S', 'P', etc., I shall not distinguish sharply between individuals and Forms. For Plato does not either much in the *Sophist*: he moves back and forth glibly between, e.g., "Theaetetus flies" and 'motion is not being'.



as Parmenides would then say, it seems that ‘motion really is not being’ means that motion does not exist.

However, Plato disagrees with Parmenides that these admissions amount to a contradiction. Plato begins by noting that we call many objects by many names:

We apply colors and figures and magnitudes and virtues and vices to man, in all of which and in myriad others we say not only that he is a man, but also good and other, unbounded things, and, in virtue of the same account, supposing other things each to be one in this way, we again say that it is many through the many names. [251a8-b4]

Plato argues here by analogy: just as one subject does not become many through having many different names predicated of it, so too it does not become “negative” through having negative names predicated of it.<sup>18</sup> That is, the subject does not become nothing through having ‘is not’ or ‘is not P’ predicated of it. A negation is consistent with the affirmation of the existence of its subject, just as the unity of the subject is consistent with a plurality of predicates.

Note too that Plato takes the abstract term, ‘color’ or ‘goodness’, to apply primarily to the subject, and the related, paronymous term, ‘colored’ and ‘good’, then to be predicated of the subject. This primacy of the abstract over the paronymous term, natural enough for a believer in Ideas, also occurs in, and, so I shall argue in Chapter Six, has great significance for, Aristotle’s views on predication.

Unlike Parmenides, Plato holds that we can predicate many names of a subject without contradiction. [256e2-257a6] He notes that those who assert monism as a philosophical doctrine will contradict themselves, as they too will have to make predications of what is, e.g., to say that being is one, and, in this way, introduce plurality. [251b8-c8] In effect, we encounter the same perplexities about being as about not-being. [250e1]

Still, Plato needs to offer a consistent position. The Stranger does not balk at accepting the inferences from commonly made statements, like ‘Socrates is not Plato’ and ‘the [white] log is not black’, to such conclusions as ‘that Socrates is Plato is not’ and ‘the black log is not’. He also accepts the Eleatic reading that these statements assert that a not being is. Hence, he says, motion really is being and really is not being. Instead, the Stranger insists that here no real contradictions arise, because not being may have being, and so may exist: ‘not being’ may name a being.

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<sup>18</sup> Note that Plato might be construed here to be rejecting predication monism.

The Stranger has asserted, 'what is not [τὸ μὴ ὄν] is'. In this way he purports to save us from ontological if not from predication monism. To do this, he offers a different reading of 'not being' than Parmenides has: "not-being" signifies a particular type of existent object, a type (γένος) contrary to the type signified by the positive term, 'being'. [258a11-b4; 260b7] 'Not-being' here is taken as some particular way of not being, not as not being absolutely, i.e., what is not in any way. [Resp. 477a3-4; 478d7] Rather, 'not-being' ('not-S') signifies a definite type of thing, that *is* this but *is not* that. So not-being, like 'not-S' in general, has existential import. [Cf. Simplicius, in *Phys.* 135,1-137,20] Just as one of the cardinal Forms (μέγιστα γένη), F, really is, so too its privative [Form?], not-F, really is.

Indeed, Plato may have been led to this reading from the fact that the grammatical construction for 'not F' (in Greek: 'τὸ μὴ ὅ'), can be read also concretely, as 'what is not F'. This reading does suggest that 'not being', "τὸ μὴ ὄν", refers to something particular that exists but is other than being. [257b3-5; 257e2-4; Philoponus, in *Phys.* 62,4-8]<sup>19</sup> Being is merely one Form or Idea among many; 'not being' will indicate all those other Forms:

So then, when a denial is said to signify a contrary, we shall agree only so much as that 'μὴ' [not] and 'οὐ' [not], when attached to the succeeding names, or, rather, the objects about which the names, said after them, are concerned, point out some other thing. [257b9-c2]

Note that this passage ("when a denial *is* said...") may imply that, while some denials do signify contraries and so the existence of their subjects, others may not signify contraries nor the existence of their subjects.<sup>20</sup>

Plato holds, then, at least in those statements under discussion, that the complex formed by a negation placed before a name, later called a metathetic predicate, (usually) signifies what really exists, sc., a particular kind of existent thing. So it signifies not so much "not being" in general, but a particular kind of not-being (τι μὴ ὄν), or even particular things that are other than being. Indeed Plato writes the plural, "not beings". [258d5] We can find many kinds of not-beings: not-dog, not-man, not-white. Thus, the Stranger says, "Also for us being is not, in virtue of however so many other things that there are." [257a4-5] E.g., Being is not Motion, and is not

<sup>19</sup> Robert Heinaman, "Being in the *Sophist*," p. 12, claims that Plato will refer to a non-existent object only "as long as it exists at some time or other," but not as not ever existing. Cf. Francis Pelletier, *Plato, Parmenides, and the Semantics of Not-Being*, pp. 40-1.

<sup>20</sup> Thus G. E. L. Owen, "Plato on Not-Being," pp. 112; 176, takes Plato, like Aristotle, to hold that, in 'S is P', either 'is' or 'P' may be negated. In the first case, existence is being denied; in the second case, the "not being" of the *Sophist*, it is not. Indeed, Owen says, 114-6, Plato insists that 'is' itself can be negated, in the very expression "τὸ μὴ ὄν". In this sense, 'not being' will mean 'non-existence'.

Similarity, etc. We shall find Aristotle et al. following this usage and speaking of “a particular not being” (‘ $\pi \mu \eta \delta \nu$ ’) and “not beings” (‘ $\tau \alpha \mu \eta \delta \nu \tau \alpha$ ’). Moreover, Aristotle will also follow the usage of taking the ‘not F’ construction to indicate a certain, amorphous but particular kind of existent object.

### *Types of Predication in the Sophist*

This reading of ‘not being’ by itself clearly does not suffice to show the consistency of ‘not being is’ and thus to meet Parmenides’ challenge. For “ $\tau \delta \mu \eta \delta \nu$ ” to indicate something that exists that is other than being also requires that there “are” or “exist” objects other than being. But Parmenides has attacked the coherence of holding this: how can there “be” something apart from being?

The Stranger has said that not being is one of the kinds of being that are, and not something that does not exist at all. [260b7-8] All kinds of being “are”, or have existence. Yet these kinds of beings “are not” being itself. He seeks to show the consistency of this position through appealing to participation in various Forms. ‘Not’, or negation in general, signifies participation in the Form of the Other, or Difference. Moreover, for something to participate in Difference requires it to participate in yet more Forms: for Difference is “Difference From”, and so requires an additional object from which to differ. E.g., ‘Socrates is not beautiful’ asserts that Socrates is other than beautiful.<sup>21</sup> Thus, negative statements are to be explained as signifying a complex participation in the Forms of Being and Difference, and perhaps in yet another Form. On this view not being exists, and ‘motion is not rest’ does not imply that motion does not exist. In this way, there can be kinds of being that *are not* being.

For example, the Stranger explains ‘motion is not’, i.e., ‘motion is not being’ in terms of the participation of motion in the Form of the Other, sc., Difference:

Therefore by necessity not being is, both in the case of motion and in virtue of all the kinds. For the nature of the other, turning each into [something] different from being, makes them not being, and in this way we say of them all to-

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<sup>21</sup> Edward Lee, “Plato on Negation and Not-Being in the *Sophist*,” John McDowell, “Falsehood and Not-Being in Plato’s *Sophist*,” p. 121. Michael Ferejohn, “Plato and Aristotle on Negative Predication and Semantic Fragmentation,” pp. 260-2, summarizes three interpretations of Plato here: 1) the presence of the Other makes the negation (‘not’ in ‘S is not P’) true (so Frede and Owen); 2) the presence of the Other denotes some contrary of P 3) the Other denotes difference in some range of properties.

gether that they are not beings, and, again, because they participate in being, that they are beings also. [256d11-e4; cf. *Prm.* 162a-b]

Thus 'motion is not being', and, indeed, any denial, of the form 'S is not P' has the structure: motion is other than Being; i.e., motion participates in the Form of Difference.

Difference is a relative Form. Plato says, "some beings are by themselves (*καθ' αὐτά*<sup>22</sup>), while others are said always in relation to one another (*πρὸς ἄλλα*)." [255c14-5; cf. *Phlbs.* 51c]<sup>23</sup> Thus Plato takes Difference here not to stand by itself, but to constitute part of a complex, 'Difference-from-Being'. Forms other than Being, like Motion and Rest, have existence, as well as difference from Being, through participating in some complex way in the various Forms of Being and Difference. Plato gives as an analogy the way in which the repetition and order of letters can constitute different words. [253a1-6] The complexes come to be through an interweaving of Forms, as words arise from letters or chemical compounds from elements.

My taking the subject here to participate in a complex Form composed of simpler Forms, Difference-from-Being, fits Plato's analogy of words and letters: for some sequences of letters form syllable units within words. Indeed, just as in 'bookworm', 'r' is both next to 'o' and not next to 'o', in different respects, so too motion both is and is not being: it participates in Being and so exists, while also participating in Difference-from-Being. Just as with the letter 'o', the Form, Being, has two separate occurrences. Again, different individuals can participate in Forms in varying degree, just as there is more 'o' in 'book' than in 'worm'.

Hence, 'motion is not being' means 'motion participates in Difference-from-Being'. Still, motion also has to exist, or else it cannot stand in thought or speech. Plato has admitted that not being is a kind of being, namely, Not-Being or, more precisely, the complex, Difference-from-Be-

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<sup>22</sup> '*καθ' αὐτά*' in Aristotle generally has the technical meaning of 'in virtue of themselves' or 'essentially', as in *Posterior Analytics* 1.4. However, in *On Interpretation* Aristotle himself also uses '*καθ' αὐτά*' in this older meaning (as I shall note below), which, I take it, he inherited from Plato. In this older meaning, the distinction is between what is complete and what is incomplete. Cf. Lesley Brown, "Being in the *Sophist*," pp. 68-9. See G. E. L. Owen, "A Proof in the *Peri Ideōn*," pp. 172-3, for a fuller discussion of this distinction and its later history in the early Academy.

<sup>23</sup> Cf. Michael Frede, *Prädikation und Existenzaussage*, pp. 16-29. C. D. C. Reeve, "Motion, Rest, and Duality in the *Sophist*," pp. 54-5, surveys different interpretations of '*καθ' αὐτά*' and '*πρὸς ἄλλα*', and finds two main camps: 1) the distinction amounts to that between a one-place and a two-place predicate [Cornford, Malcolm, Vlastos] 2) "the complement of the verb 'to be' either does not import something different from the subject, or does import something different from the subject [Owen, Frede, Heinaman, Reeve]." See too David Bos-tock, "Plato on 'Is Not'," nn. 2 & 20, on the secondary literature.

ing, that also participates in Being. So 'motion is not being' also makes, or presupposes, the claim that motion is, i.e., that motion participates in Being.

Thus, to say 'S is not' implies that the subject, S, participates in various complexes of Forms. On the one hand, the denial claims that S participates in not being, i.e., in Difference-from-Being. Now Plato wants to take 'not being' to indicate a particular kind of thing, a particular not being ("τι μὴ ὄν"). So S is *not* Q<sub>1</sub>, Q<sub>2</sub>, ..., where 'Q<sub>i</sub>', for some i, refers to a particular kind of thing or being.<sup>24</sup> E.g., 'Socrates is not' claims that Socrates participates in Being and in Difference-from-Being, and not only in that but also in Difference-from-Caninity, Difference-from-Birdhood, etc.<sup>25</sup> Thus 'S is not' needs to be completed as 'S is not Q<sub>i</sub>'. Again, 'S is not' asserts also that S is, that S participates in a particular kind of being, e.g., that Socrates is human and participates in the Form of Humanity. Hence 'S is not' and so too 'S is' both require expansion: the various respects in which 'is' or 'is not' is asserted can, and sometimes should, be specified further.<sup>26</sup> All these results fit in with the aspect theory.<sup>27</sup>

So Plato eliminates the contradictory nature of 'is and is not' by insisting that both 'is' and 'is not' need to have further determinants. Thus 'the dog is', because the dog "is" an animal, tan, hungry; 'the dog is not', because the dog "is not" a plant, green, asleep. Plato then takes statements of *secundum adiacens* to presuppose, if not imply, a further determinant, of *tertium adiacens*: if S is (not), then, for some P, S is (not) P.

Here then Plato has a fused, single sense of 'is', of participation in Being, or existence, that may be augmented in various ways.<sup>28</sup> On the one

<sup>24</sup> John Malcolm, "Remarks on an Incomplete Reading of Being in the *Sophist*," pp. 162-5, holds that 'not being' signifies what does not exist in any way. I agree with Robert Heinaman, "Being in the *Sophist*," p. 3, who rejects this reading.

<sup>25</sup> Robert Turnbull, "Zeno's Stricture and Predication," p. 33.

<sup>26</sup> Cf. G. E. L. Owen, "Aristotle and the Snares of Ontology," p. 260 n.2. I also agree with Owen's remark there that 'καθ' αὐτό' and 'πρὸς ἄλλα' point out "incomplete uses of the verb", in the sense that to be 'καθ' αὐτό' or 'πρὸς ἄλλα' again implies a participation in a complex of Forms.

<sup>27</sup> Nicholas Denyer, *Language, Thought and Falsity in Ancient Greek Philosophy*, p. 132, says of such an account that it "...however is so grotesque that it is hard to imagine Plato adopting it." He thinks that it commits Plato to the following inferences: S is P; therefore S is other than Q; therefore S is not Q. The second inference follows, he says, from the standard account of denials. One problem with his account is that for Plato the original statement is not a denial, but a metathetic affirmation. (Denyer ends up, pp. 136-7, attributing to Plato a version of the two-name theory beloved by Geach.)

<sup>28</sup> G. E. L. Owen, "Plato on Not-Being," p. 128; Michael Frede, *Prädikation und Existenzaussage*, p. 36. Frede claims, p. 30, that Plato has two incomplete 'is': 1) the definitional, as in 'F-ness is F' and the 'ἐστίν ὅπερ' construction 2) the participative, as in 'motion is rest'. Still Frede claims, p. 72, that Plato has not different meanings of 'is' but different uses. See Robert Heinaman, "Being in the *Sophist*," pp. 14-5 for a critique of this view. Heinaman, p.

hand, a bare assertion of 'is', as in 'motion is' asserts that motion participates in Being. It is as if, in this use, 'is' is a paronymous term, derived from Being, just as 'good' or 'moves' are derived from 'Goodness' and 'Motion': when S participates in Goodness or Beauty, we say that S is *good* or *beautiful*; when S participates in Being, we say that S *is*. Hence to say 'S is' amounts to saying that 'S is existent' or 'S is being' (ἔστιν ὄν).

On the other hand, judging from Plato's remarks about the interweaving of Forms and its analogy to letters, it is plausible that in a predication other than of a bare 'is' (sc., in a statement of *tertium adiacens*). the subject participates jointly, in some complex way, in Being and in one or more other Forms.<sup>29</sup> E.g., 'S is good (P)' asserts not only that S participates in Goodness (P-ness), but also that S participates in Being, and, further, as Goodness is a kind of Virtue, it asserts, implicitly, that S participates in Virtue. The main predication concerns the relation of 'P' to 'S'. Still, 'is' is predicated additionally.

Thus any occurrence of 'is', the term paronymous with 'Being', indicates participation in Being. So then even [many] negative statements, 'S is not' and 'S is not P', will indicate the participation of S in Being, in the latter case, in combination with other Forms, sc., Difference and P-ness. I shall claim that Aristotle retains this doctrine: all statements that are logically affirmations require and assert existential import for their subjects.<sup>30</sup>

Let me turn to self-predication, as it raises some issues that Aristotle uses to attack Plato's views. What about a statement like 'motion is motion'? In the *Sophist* even such a statement contains an interrelation of Forms, for it asserts that motion participates in Being, and, indeed, is one of the kinds of Being. But how to handle the major predication, of 'motion' of the subject? Plato himself seems to take it to mean 'motion is the same as motion', and, in this way, analyzes the predication of motion as the participation of the subject in a complex predicate, Sameness-as-Motion:

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6, pushes for a fused sense of 'is', including the concept of existence. So too John Malcolm, "Plato's Analysis of τὸ ὄν and τὸ μὴ ὄν in the *Sophist*," p. 130; Benson Mates, "Identity and Predication in Plato," p. 223; William Prior, *Unity and Development in Plato's Metaphysics*, pp. 147-51. Francis Pelletier, *Plato, Parmenides, and the Semantics of Not-Being*, pp. 38; 94, denies that Plato has different senses of 'is', but, p. xvii, he takes 'to be' to be predicative.

My view disagrees with that of Gregory Vlastos, "An Ambiguity in the *Sophist*," who sees Plato to have two uses of 'is': Pauline predication and simple coupling. This view has been mostly abandoned. As Vlastos himself notes, Plato does not make the distinction clearly. I have more sympathy with Vlastos, p. 273, n. 9: "The truth of a Pauline predication would not depend for Plato on the historical accident of the instantiation of its terms."

<sup>29</sup> Again, interpretations of the interweaving of Forms abound. See Francis Pelletier, "Some Interpretations of the *Sumplōkē Eidōn*" for a useful survey.

<sup>30</sup> James Kostman, "False Logos and Not-Being in Plato's *Sophist*," pp. 205-7.

For when we say that it [motion] is the same and not the same, we have not spoken similarly, but when we say that it is the same, it is on account of the participation of the same in relation to itself, while, when we say that it is not the same, it is on account of its community with the other, on account of which, separated from the same, it has become not that but other, so that it again might correctly be said not to be the same. [256a11-b4]

So Plato has subsumed the case of ‘S is S’ under his usual analysis of the tripartite sentence, ‘S is P’. We cannot state what a Form is by itself, without bringing in some combination of other Forms. This conclusion fits Plato’s theory of the statement, according to which no name by itself constitutes a statement. Rather, a statement requires a combination of words, referring to different objects, as I shall discuss further below.

In this way, Plato avoids self-predication and, thus, perhaps, the Third Man Argument.<sup>31</sup> For ‘the Large is large’ asserts that the large participates in the complex, Sameness-as-the- Large, and not that the Large participates in itself, the Large.

But what about the case, ‘Being is’? For, in general, ‘S is’ signifies that S participates in Being. But then we have self-predication.

Perhaps, Plato holds that ‘Being is’ should be read as ‘Being is Being’. The latter statement is then analyzed, standardly, as: Being participates in Sameness-as-Being. Even with ‘being is’, ‘is’ signifies participation in Being, but now only in the complex, ‘Sameness-with-Being’.

However, this analysis becomes frustrating. For, it seems, according to it, we can have no precise knowledge of a Form by itself (καθ’ αὐτό), given that a statement reflects the structure of thought and a statement requires a combination of Forms.<sup>32</sup> Then the nature or essence of a Form seems forever beyond our grasp. We want to speak of “just what the Form is”, in

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<sup>31</sup> Alexander Nehemas, “Self-Predication and Plato’s Theory of Ideas,” pp. 93-6, has made it abundantly clear that Plato accepts self-predication in the middle dialogues. On my view, he continues to do so in the later dialogues, but understood such that he reads a self-predication to indicate a participation with sameness. Nehemas too admits that Plato had to modify his view of predication in the *Sophist* in order to allow for many predicates of a single subject. He and I may disagree about how Plato modified his views though.

<sup>32</sup> Ernst Tugendhat, *II KATA TIMON*, p. 10, says that ‘αὐτὸ καθ’ αὐτό’ ‘it by itself’ purely is a Form or substance, and refers to *Phaedo* 78d; *Symposium* 211b1.

itself, and not as related to other Forms.<sup>33</sup> But such talk looks impossible. For, as soon as we state its essence, we must introduce other Forms.<sup>34</sup>

Such considerations may have motivated Aristotle's talk of "just what it is" (*ὅπερ ὃν τι*), in discussing Parmenides in *Physics* I, and perhaps too his complaint that Plato separates the Form from its essence.<sup>35</sup> To say that a Form, *F*ness, is just what it is does not lend itself well to Plato's analysis of 'is'. For consider 'motion is just what motion is': although the first 'is' can be handled on the sameness analysis, the 'is' in 'just what it is' looks harder to handle thus. We can see how Aristotle might be led to worry a lot about whether something is the same as its essence, through his analysis of the first 'is'. [*Metaph.* VII.6]<sup>36</sup> Worrying about the second 'is' may have led him to formulate a new conception of predication *καθ' αὐτό* —no longer 'by itself' but 'in virtue of itself' or 'essentially'—according to which we may state truly what the subject, taken by itself, is.<sup>37</sup> Moreover, despite the analysis of 'S is S' that I have attributed to Plato, it is tempting to proceed and say that 'motion "is" motion' ('S is S', in this '*ὅπερ*' sense of 'is') claims that motion participates in itself. For then we seem to be isolating the Form in itself, without relation to other Forms. But, in this way, the Third Man Argument, so beloved and viewed as so decisive by Aristotle, can come to be generated once again.

I realize that these remarks, as well as my interpretation of Plato's account of not being and the interweaving of Forms, have many possible ob-

<sup>33</sup> A. P. D. Mourelatos, *The Route of Parmenides*, pp. 57-9, has called this use of 'is', in 'just what it is', "the speculative is", and has attributed it to Parmenides. Also cf. Alexander Nehemas, "Self-Predication and Plato's Theory of Forms," pp. 98-9. This sort of 'is' may well support a predication monism. As I am interested here mostly in how Plato read Parmenides and how Aristotle read them both, I shall not pursue this issue.

<sup>34</sup> Hence Plato speaks of grasping the Form by intuition, i.e., not in a discursive way that can be reflected in a statement. [*Resp.* 511d; 532b-d] Likewise, Aristotle will speak of grasping the essence, the formula of the definition, by *noûs*. [*Eth. Nic.* 1141a7-8]

<sup>35</sup> Simplicius, in *Phys.* 122,6-7, identifies Aristotle's '*ὅπερ ὃν*' with Plato's '*αὐτοτόν*'. Aristotle's discussion of '*ὅπερ ὃν*' becomes especially pertinent if Patricia Curd, "Deception and Belief in Plato's *Doxa*," p. 123, is right that for Parmenides 'is' is what it is to be.

<sup>36</sup> M. J. Woods, "Substance and Essence in Aristotle," p. 169, claims that Plato gets the Third Man Argument on account of distinguishing what a predicate is said of and that on the basis of which a predicate is said. In effect, if you do this you can never assert just what something is. Aristotle avoids these pitfalls, Woods says, p. 170, by denying non-identity for substances, and self-predication for non-substances: a substance is identical to its essence, while an accident is not. However, Frank Lewis seems to deny this connection, in "Plato's Third Man Argument," p. 134.

<sup>37</sup> Thus Proclus, says, *The Elements of Theology*, p. 10,10-1: "Therefore what is good primarily is nothing other than the good. For, if you added something else, you would diminish the good by this addition and make something good (*τὸ ἀγαθόν*) instead of the good simply (*τοῦ ἀγαθοῦ τοῦ ἀπλῶς*)."



jections and rivals. What I shall say about Aristotle's theory of predication does not depend completely on all these claims about Plato. Still they do, I hope, have some merit in their own right. Also they present a view of Plato from which Aristotle might have proceeded to develop his own views. Furthermore, so I shall argue, the prevailing copulative interpretation of Aristotelian predication has neo-Platonist roots, and fails to capture Aristotle's views. It may well be that it does not capture Plato's views either. If so, then many interpretations of Plato, assuming a copulative view of predication, may have thus fallen into error.

In any case, let me summarize my view on how Plato understands predication. In most cases, Plato takes the simple affirmation of *secundum adiacens*, 'S is', as 'S participates in Being' or 'S exists'.<sup>38</sup> Moreover, that S is implies usually the further participation of S in some P, a further determinant of Being. The exception is: 'Being is'; this means 'Being is Being', i.e., 'Being is the same as Being', and at best signifies that Being participates in Sameness-as Being. 'S is not' usually signifies that S participates in Difference-from-Being; in a few cases, as with 'Being is not', it may signify the participation in Difference-from-[some other Form].<sup>39</sup> Plato reads the simple affirmation of *tertium adiacens*, 'S is P', to imply 'S participates in Pness, and S participates in Being' (and perhaps some further relations between Pness and Being), i.e., as 'S exists and 'P' is predicated of S'. Plato analyzes 'S is not P' as: S participates in Difference-from-Pness, where Difference and Pness are separate Forms constituting a complex, and S participates in Being. I.e., in later terms, 'S is not P' iff 'S exists, and not-P belongs to S. 'Not-P belongs to S' means that the metathetic predicate 'not-P' is predicated of the subject S. Plato regularly construes denials as metathetic affirmations: 'S is not P' usually means 'S is not-P'. [Philoponus, in *Phys.* 70,25-8]<sup>40</sup> As we have seen, he does leave open other possibilities at 257b-c, e.g., perhaps, to take 'S is not P' as 'it is not the case that S is P', but does not say so definitely.

All this amounts to a version of the aspect theory that I am proposing as an interpretation of Aristotle. At the very least, I have offered a reading of Plato's theory which, if not correct, still may have suggested itself to Aristotle.<sup>41</sup> Indeed, in discussing Aristotle's views on predication, we shall find

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<sup>38</sup> Ernst Tugendhat, *ΠΙ ΚΑΤΑ ΤΙΝΟΣ*, p.12: "...für Platon der Sinn des Seins sich in der einfachen Präsenz erschöpft..."

<sup>39</sup> Here G. E. L. Owen, "Aristotle and the Snares of Ontology," has a point: how can Plato deny that something exists altogether?

<sup>40</sup> R. E. Allen, "Participation and Predication in Plato's Middle Dialogues," p. 54.

<sup>41</sup> Stanley Rosen, *Plato's Sophist*, pp. 230; 240, would put me in his Frede/Owen camp and claim that I have misapplied the theory of Aristotle/Frege to Plato. Perhaps, but then my focus is on Aristotle. In defense of my interpretation of Plato, though, note that the sort of

passages that recall strikingly these texts that I have cited from the *Sophist* in line with the interpretations that I have offered of them.

Plato then has only a single type of predication, the fused 'is': every (normal) use of 'is' both signifies participation and existence.<sup>42</sup> The participation is (usually) complex: it comprises both participation in Being, i.e., existence, as well as participation in other Forms. This means that every predication, whether of *secundum adiacens* or of *tertium adiacens*, makes an existence claim, in addition to any other assertion or denial of a further predicate it may make.<sup>43</sup> This agrees with what I have concluded about Greek usage and Parmenides as well.<sup>44</sup>

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"existence" that I have been attributing to the Greek notion of being differs from the "existence" that Rosen so opposes, p. 232: the notion of existence as a modern quantifier. See Chapter Nine for a comparison.

<sup>42</sup> Jean Roberts, "The Problem about Being in the *Sophist*," p. 239, agrees that Plato has a fused sense of 'is' and that his account of being and not-being differs from his account of true and false statements. She would disagree though with my finding a theory of predication in the interweaving of Forms, which she takes to be purely metaphysical.

Ernst Tugendhat, *TI KATA TIMON*, p. 6, says that in the middle period Plato had truth as the central idea of being. E.g., *Phaedo* 65d-67b; *Symposium* 211a; 212a5; *Republic* 508d-e; 475e-479c; *Phaedrus* 247d4; 248c3; also in the later period *Philebus* 59b-c. 'Truth' here should be understood in a broad sense, like Heidigger's '*Unverborgenheit*'. See n. 10, and Paul Friedlander, *Platon*, pp. 233-43.

<sup>43</sup> This claim is compatible with the claims made, e.g., by J. L. Ackrill, "Plato and the Copula," pp. 212-3, that Plato indicates the existential sense of 'is' through the construction, 'S participates in being' [254d10], sc. that 'participates' parses the copulative use of 'is' (cf. Frege's "falling under a concept"), and that 'participates in sameness' parses the 'is' of identity. Ackrill goes on to claim, p. 220, that Plato uses '*καὶ ὁμοῖα*' plus the genitive to indicate the difference of the subject from the item named in the genitive case, while using '*καὶ ὁμοῖα*' plus the dative to indicate the general connection of Forms with one another. The point would be that 'is' in the sense of 'participates' is the base meaning, that then could be qualified further. Below I construe '*ὑπάρχει*' ('belongs') as the reverse relation of 'participates' ('μετέχει').

F. M. Cornford, *Plato's Theory of Knowledge*, p. 296, says that Plato is marking off an existential use of 'is' from other uses. He says, p. 279, that the copula "has no place anywhere in Plato's scheme of the relations of Forms." However, K. Sayre, *Plato's Analytic Method*, pp. 196-9, objects to this distinction. In any case, if this distinction holds, Plato would be distinguishing here two types of interweavings: there would still remain a single use of 'is', connecting the differently interwoven complexes to the subject by participation. Also note that Aristotle seems to follow the latter usage, of the dative, in his '*ὑπάρχει*' construction.

<sup>44</sup> Gregory Vlastos, *Platonic Studies*, p. 46, does not like to equate '*εἶναι*' with 'be real' or 'exist' for how then will things have degrees of being? Perhaps in the way that Augustine and Anselm do: the more positive attributes, the more reality. Cf. Russell Pannier and Thomas Sullivan, "Being, Existence, and the Future of Thomistic Studies: A Reply to Professor Nijenhuis," p. 88; Donald Morrisson, "Aristotle's Theory of Degrees of Being." I stress again that my sense of 'exists' does not amount to the existential quantifier. Cf. L. M. de Rijk, "Did Parmenides Reject the Sensible World?," p. 49.

But how can I attribute a single, fused sense of 'is' to Plato? For I have admitted that 'Being is Being' and 'Motion is Being' make two different types of predication: of sameness with and of participation in Being. Still, in either case we have 'is' signifying some relation to Being. Maybe Plato thinks that the context specifies how that relation should be determined further; so he suggests, at any rate, for 'motion is and is not'. Moreover, I can borrow Benson Mates' useful scheme for defining different types of the use of 'is' in terms of a single, primitive 'is':

- (1) 'A is the same as B' is true iff 'A is B' is true and 'B is A' is true.
- (2) 'A is (a) B' is true iff 'A is B' is true and 'B is A' is false.<sup>45</sup>

(1) handles cases of self-predication like 'Being is Being; (2) handles cases of hetero-predication. I suggest using the aspect theory to describe this primitive 'is': 'A is B' means 'A exists as B'. As long as we take these indefinite claims universally, Mates' scheme works. Note too that if '(every) A exists as a B' and '(every) B exists as an A' are true, then it is easy to fall into 'ὅπερ' talk: B is just what A is. So Plato can have a single, basic 'is' and still make different uses of it. Self-predication and hetero-predication will require as their truth makers complexes of Forms with participation in Sameness and in Difference respectively. Both types of predication will have a common 'is', signifying the basic existence of those complexes.<sup>46</sup>

### *Plato on the Structure of a Statement*

For my purposes, Plato's discussions of the structure of the statement (λόγος) have importance as they confirm some of the points that I have made above. Moreover, they show that Aristotle proceeded in his discussion of 'is' and predication from the theories that Plato had developed,

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<sup>45</sup> Benson Mates, "Identity and Predication in Plato," pp. 42-3. He adds: "and 'A is<sub>p</sub> B' is false." 'Is<sub>p</sub>' is Pauline predication, as in 'charity is generous' means 'whoever is charitable is generous'. As Mates notes, n. 33, his scheme is only a rough one, and may not meet the niceties of Greek expression. I am not certain whether the Pauline condition is needed for the relation of participation, if the primitive 'is' be as I suggest.

<sup>46</sup> R. E. Allen, "Participation and Predication in Plato's Middle Dialogues," p. 45, claims that, in the middle and late dialogues, "Plato has no word for 'predication'." Rather Plato says that particulars are 'called by the same name' as Forms. Cf. *Phaedo* 102b2; *Parmenides* 130e5; *Metaphysics* 987b8. Since the name of a Form also names a form, Plato has an ambiguity of 'is': 'names' or 'is named after'. This account fits Aristotle's distinction of synonymy and paronymy, but misses the need to have a statement make an assertion of being. Cf. Charlotte Stough, "Two Kinds of Naming in the *Sophist*," pp. 360-1.

principally in the *Sophist*. I shall begin by listing some of the features of Plato's discussions that reappear in Aristotle's. I shall end with a discussion of Plato's account of true and false statements. Here Plato makes some remarks that can be taken to adumbrate an aspect theory of predication rather explicitly.

In discussing the interweaving of Forms, Plato appeals to an analogy of how letters, put together in lawlike ways, come to form words. [252e9-253c2]<sup>47</sup> So too, he says, a statement is composed of names and verbs put together in lawlike combinations (*συναρμόττει*). [261d6] A name (*ὄνομα*) is an expression used as a sign of an agent, while a verb (*ῥήμα*) is a sign of action (*πράξις*). [262a4-7] Plato even introduces a term for metathetic predicates, like 'not-beautiful'. He says, "So shall we say that this is something having some non-name [*ἀνώνυμον*] or surname [*ἐπωνυμία*: literally, 'a name derived from something else'; in this case, from the positive term, 'beautiful']?" [257d9-10] Aristotle too calls such expressions 'non-names'. [*Int.* 19b7; cf. Parmenides, Fr. 8.17] Also Aristotle repeats Plato's views on the relation between written language, spoken language, and thought [263e2-7] at the beginning of *On Interpretation*.

While we shall see Aristotle accepting this analysis on the whole, it is interesting to note that Plato defines the verb first, while characterizing a name in terms of the subject for the verb. Perhaps the primacy of the verb, which may be used as a complete statement, without another expression naming the subject, suggested this approach to Plato. Yet Aristotle, emphasizing the subject and the substance, will take the name as primary, and the verb to signify an attribute of the subject.

By distinguishing names and verbs, which signify real objects and their attributes respectively, from the statements making claims about which objects have which attributes, Plato, and later Aristotle, can explain how it is possible to speak of what is not, while still not speaking of nothing. For names and verbs all refer to real beings; only certain combinations of them, as given in statements, do not. Thus, 'log', 'white', and 'black', and 'being' ('is'), all refer to things that are, or exist. Still certain complexes composed of them and made into statements may refer to what is not, where, in this case, 'what is not' refers to what does not exist at all (sc., the simple denial, 'it is not the case that it is'). In this way there can be false statements, without speaking of nothing: "It is necessary for a statement, whenever it be, to be of something, while it is impossible to be of not something." [262e6-7] A false statement still makes a statement about something that exists, but describes it as being what it is not. Truth and falsity then become qualities (*ποιά*) of a statement. [263a12] Through this

<sup>47</sup> A. C. Peck, "Plato's *Sophist*," reviews some interpretations of 'σμπλοκή εἰδῶν'.

analysis, Plato intends to defeat the Eleatic challenge. Even false statements and true denials speak about what is, in the sense that each of their parts signifies something that is, although combinations of these parts may not signify, or describe, anything that is.

Plato describes statements as combinations of names and verbs thus: A true statement “states beings as they are (τὰ ὄντα ὡς ἔστιν)” about the subject; a false statement states “not beings as [if] they are (τὰ μὴ ὄντα ὡς ὄντα)” about the subject, [263b4-9] Again, “a false statement will be thought to say that beings are not and the not beings are.” [240e10-1] He means here that, in a true statement, the combination of names and verbs, or Forms, represented by the statement, refers to what exists. In contrast, it does not exist, but is claimed to exist, in a false statement.<sup>48</sup>

As I have discussed regarding Parmenides, one way of reading a statement of *tertium adiacens* (‘S is P’), is to make a corresponding statement of *secundum adiacens* making a simple assertion of being about a complex subject (‘S-P is’). Thus, true statements make a true existence claim: ‘Theaetetus sits’ and ‘the log is white’ become ‘the sitting of Theaetetus is’, or ‘exists’, and ‘the white log is’.<sup>49</sup> However, false statements make false existence claims: ‘Theaetetus flies’ and ‘the log is black’ become ‘the flying of Theaetetus is’ and ‘the black log is’. Yet all the components of the complex subject really exist: Theaetetus, flying, logs, black,—and “is”, or Being,—all exist.

The Stranger also describes a false statement as stating about the subject “beings that are other than beings”. [263b7] Plato here assumes that we can think of being as if it were not being, of not being as if it were being, and likewise for the same and the different, and other opposites. [263c9-d7] He then is conceding that in thought not being can appear as being, and being as not being; i.e., in later terms, that not-being, what does not exist *in re*, can exist *in intellectu*. For surely such combinations as the flying Theaetetus does not exist *in re*. Evidently, he does not believe this admission, of the existence, *in intellectu*, of non-existents, weakens his case against Parmenides. For, after all, I suppose, Parmenides too admits that we mere mortals can be deceived, and hold false beliefs. Hence Parmenides too, in claiming that mortals are deceived, has to admit that deception, or false belief, belief in what is not the case, is possible, and thus that what is not (at least complexes of simpler things that do exist or have existed *in re*) can exist in thought. [*Metaph.* 986b31-4]

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<sup>48</sup> Cf. 240e2-3: in a false statement it may be thought that there are beings that do not exist at all.

<sup>49</sup> This is how Mohan Matthen, “Greek Ontology and the ‘is’ of Truth,” p. 125, and L. M. De Rijk, “The Anatomy of the Proposition,” p. 29, construe Plato’s statements.

I see two ways of understanding Plato's view of a false statement. On the first, a false statement has no truth maker *in re*. It asserts a combination that does not obtain. The false affirmation, 'Theaetetus flies', is false, because Theaetetus does not participate in flying; the false denial, 'Theaetetus is not sitting', is false, because Theaetetus does not participate in Difference-from-Sitting.<sup>50</sup> Still, true denials do assert that a negative predicate ('not-flies') holds of the subject ('Theaetetus').<sup>51</sup> On this interpretation, what exists in thought has a real basis *in re*: the simple components all signify objects that are *in re*, and it is the mind, a real being, that puts these simple components into combinations that do not exist *in re*.<sup>52</sup> Here the mind resembles the divine craftsman of the *Timaeus*, who pours the simple Forms together into a receptacle. Still, the complex of Forms asserted by the false statement has existence only *in intellectu*. Aristotle too will require that, in his technical, protocol language at least, that all simple names and verbs signify the *per se* beings listed in the categories, even if some of their complexes do not.

I see a second reading of Plato that will allow a false statement to have a truth maker *in re*. For he does say that a statement cannot be about nothing at all [263c9], and that a false statement speaks about things different from beings. [263b7] Perhaps then a false statement refers to a complex of forms that obtains linked to the Form of Difference, i.e., to the fact that refutes it coupled with a negation. But this account would explain 'that Theaetetus flies is false' more than the falsity of 'Theaetetus flies': the flying Theaetetus is other than Being.

Regardless of how successfully Plato argues against Parmenides in the *Sophist*, he does make remarks about the statement that suggest an aspect theory of predication strongly. To say that a statement makes a statement about how the subject is, or that a complex of Forms participates in Being, implies that every statement makes an existence claim. Moreover, he suggests that the subject ('S') has to have existential import: every statement must be of something [262d2-3]; "in all cases there would not be a statement being of nothing." [263c9] Hence Plato holds every statement to make an existence claim for its subject. [Philoponus, *in Phys.* 47,21-2]

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<sup>50</sup> To this extent, I agree with Job Van Eck, "Falsity without Negative Predication," pp. 43-5.

<sup>51</sup> John McDowell, "Falsehood and Not-Being in Plato's *Sophist*," p. 122. I agree too with his remark, p. 133, that Plato is distinguishing the 'is not' of a (true) negative predication from the 'is not' of a false statement.

<sup>52</sup> Cf. Richard Gale, *Negation and Not-Being*, p. 1: "...we can account for the truth conditions of negative propositions without resort to negative events, although we shall require negative facts, but such facts will turn out to be about timeless relations between positive entities."

Further, he also suggests that statements go on, indeed, must go on, to determine the being or existence further, by specifying a certain respect or aspect. In attacking father Parmenides, the Stranger proposes to show “both that not being is in virtue of something (κατὰ τι) and again that being is not in a certain respect (πῇ).” [241d7] By itself, this assertion does not claim that a predication of ‘is’ must be continued through further specifying an aspect. Instead, it shows mostly how to avoid contradictions by specifying different respects. But, still, like the overall strategy of the Stranger for asserting ‘not being is’, this use does suggest that statements of ‘is’ and ‘is not’ need to be qualified further to avoid contradiction. [Philoponus, in *Phys.* 85,15-9] E.g., the dog both is and is not, because the dog *is* an animal and *is not* a plant. So too the common phrase, “ὄντως ὄν” (“really being” or “really existent”), makes the same suggestion, as ‘being’ is then qualified adverbially.

Thus, like Parmenides, Plato seems to have a single, fused, existential sense of being, or ‘is’.<sup>53</sup> Moreover he appears to be moving towards qualifying statements of being further. As I have mentioned, Aristotle begins his logical investigation of the statement by beginning with Plato’s views in the *Sophist*. All this points towards the development of an aspect theory of predication.

### Physics I

Once again, I am concerned here to note some points that help towards comprehending Aristotle’s theory of predication, and not to present Aristotle’s refutation of Parmenides nor to give a full commentary on the text.

Aristotle first attacks Parmenides’ conclusion, that “all are one.” He does so by insisting that “‘being (τὸ ὄν)’ is said in many ways.” Here he lists the ways of being a substance or a quantity or a quality. [185a21-6] In effect he gives here the list of categories, i.e., of types of being *per se* from *Metaphysics* V.7 (to be discussed in the next chapter). Now, if being is said in many ways, then all things cannot be one, since there will be beings that are substances and quantities and qualities, and these differ from one another.

Perhaps, Aristotle continues, Parmenides escapes this criticism by saying that the one is bounded. Then the one is a quantity. But a quantity can-

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<sup>53</sup> Here I agree with David Bostock, “Plato on ‘is not’,” pp. 92-4; Lesley Brown, “Being in the *Sophist*: A Syntactical Enquiry,” p. 53. This conflicts with G. Vlastos, “A Metaphysical Paradox,” p. 47.

not exist independently of substance. Hence substance must exist too. Thus again his claim, that all things are one, is refuted. [185a32-b4]

Aristotle also notes that, like 'being', 'one' is said in many ways. He then seeks to show that in none of these ways does it follow that all are one. [185b5-25] In fact, to say that the one is many involves no contradiction. For it is one thing to be white and another thing to be musical; here 'one' is taken as 'one in definition'. 'White' and 'musical' have different definitions, just as 'cloak' and 'mantle' are one in definition. Yet the same thing, one thing, can be both white and musical. Thus, in this sense, the one is many. [185b32-4] Likewise, a continuous *quantum* may be one in act but many potentially. [186a3]

These passages all confirm that Aristotle holds Parmenides to have a single sense of 'being' or 'is'. For he attacks him for having it. I have claimed the same in discussing Parmenides. In opposition, Aristotle holds that 'being' ('τὸ ὄν': literally the substantive, 'that which is being') is said in many ways. He details these ways further as I shall discuss in the next chapter. Given that Aristotle means to apply this distinction of senses of 'being' to Parmenides' *dictum*, that 'all things are one', he must intend it to apply to the use of 'is' ('ἐστίν') there. Hence Aristotle is holding that 'is', as used in a statement, is said in many ways. Indeed, he seems to criticize Plato for admitting that 'is' is said in but a single way, and then postulating a single Form, of Being, for it. [187a2] Rather, 'being', like 'good', since it is said in many ways, cannot have a single sense or Form as its referent. [*Metaph.* V.2; *Eth. Nic.* I.6]

Does this claim mean that for Aristotle 'is' is ambiguous, and that beings are homonyms?<sup>54</sup> If so, then I shall have erred in attributing an aspect theory with a single sense of 'is' to Aristotle. I shall postpone settling this issue until I have discussed more texts.

Still, we may gain some insight into it from Aristotle's contrast of the two claims, that being is said "in many ways", versus being said "simply" (ἀπλῶς). [186a24-5; *Gen. Corr.* 317b5-13] Now Aristotle commonly contrasts 'simply' with what is said in a certain respect ('τόδε τι' or 'πῇ'). [190a32; *An. Pr.* 49a27-8; *Soph. El.* 166b37]<sup>55</sup> The latter means that the predicate must be stated with a further determination or specification, while the former holds without any further qualification. So the use of 'ἀπλῶς'

<sup>54</sup> So Franz Brentano, *Von der mannigfachen Bedeutung des Seienden nach Aristoteles*, p. 6 [trans. R. George, p. 3]. Cf. Philoponus, in *Phys.* 62,20-5.

<sup>55</sup> Cf. Alexander, in *An. Pr.* 366,35-367,3. Michael Loux, "Aristotle and Parmenides: An Interpretation of *Physics* A.6," pp. 287-9, holds that 'that which is' and 'that which is not' are not complete expressions. To be sure, they need potential filling out, but they are complete, as we shall see in discussing the inference.



here suggests that Aristotle is equating Parmenides' view that 'is' is said in only one way with the claim that 'is' is said without any further qualification. Thus, when Aristotle himself maintains that 'is' is said in many ways, he would be claiming that 'is' must be able to be specified further, by many different determinations.<sup>56</sup>

For Aristotle then, Parmenides' mistake here lies not in taking 'is' to have a single, fused sense, but in misconstruing that fused sense: Parmenides does not see that 'is' requires, and always has, at least implicitly, further determination: "for who understands being itself (αὐτὸ τὸ ὄν) if not to be just what is some being (τὸ ὅπερ ὄν τι)?" [187a8-9] Likewise, Plato errs by having 'is' signify a single Form, since, once 'is' is completed as it needs to be, it will signify not one but many.<sup>57</sup>

Also, Aristotle points out against Parmenides that, even if being were said in only one way, it would not follow that only one thing exists. For a genus or species, or Form if you like, can be one, i.e., one in definition, and yet have many instances. [185b19-20] Thus there might be but one whiteness (literally: 'the white', 'τὸ λευκόν'), and yet many things that are white. [186a25-7] Still, "being white and being the thing indicated will be different." [186a29-30] Even if 'whiteness', or 'being', were to designate a single thing, still it would not follow that there can be only one thing that has whiteness or being.

In saying that whiteness and the thing that is white differ, Aristotle is sharply distinguishing the abstract expression, 'being white', i.e., 'whiteness', from the paronymous concrete term, 'white', in his technical language. [*De An.* 429b10; cf. Simplicius, in *Phys.* 77,25; 121,4-20] Above, I have pointed out that Plato too makes this distinction. Note that this distinction is less obvious in Greek than in English, since Plato and Aristotle often use the substantive, a definite article plus a concrete noun (e.g., 'τὸ λευκόν'), in place of the abstract noun ('λευκότης'). The former construction can also be read to designate something that is described by that concrete noun, e.g., that which is white, sc., a particular thing having whiteness. I shall contend in Chapter Five that this distinction, of the ab-

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<sup>56</sup> Suppose Aristotle links 'being is said in many ways' with 'being is one', in the sense that more ways give more beings. So Simplicius, in *Phys.* 116,26-7; 117,15-7. But Aristotle cannot mean that the number of beings is equal to the number of predication relations: for then he would recognize only ten beings. Simplicius, in *Phys.* 93,5-10, holds that Aristotle escapes Parmenides' *aporia* by viewing predication not as the relation of two things, subject and predicate, but as the being of the subject, determined in many ways.

<sup>57</sup> Philoponus, in *Phys.* 87,1-10, says that particular things come out of an *apeiron* through being determined. Further, he, 82,4, describes 'not being' as the *apeiron* and as unformed matter. He thinks, 82,9-26, that Plato does not solve Parmenides' objection, on account of still agreeing that being is one and is said in only one way.

stract 'Fness' from the concrete 'that which has F-ness', has great importance in understanding Aristotle's theory of predication.

Aristotle also remarks that some earlier philosophers had attempted to avoid Parmenides' arguments by eliminating the explicit presence of 'is' from statements. Those like Lycophron eliminated 'is' and would simply say, 'man white' or 'man walking', probably as if pointing, "Lo!", as in Wittgenstein's slab language. [185b27-8]<sup>58</sup> Philoponus says that Lycophron held that \*"Socrates white" suffices to make the predication, and that 'is', if attached, gives being to white.<sup>59</sup> Lycophron would be acknowledging 'is' to make a claim of being or existence, but would be trying to avoid it, in order to avoid Parmenidean refutation. Others made all predications, at least those of *tertium adiacens*, into verbs, and eliminated the explicit 'is' and predicate complements. Thus, 'a man is walking' and 'a man is white' came to be rendered as 'a man walks' and 'a man whitens', in the spirit of Russell's "Pegasizing". [185b29-30] Their motivation too lay in trying to avoid the Eleatic argument that, e.g., Socrates is many since he is Socrates and is white and is... Then Socrates would *be* many things. [Philoponus, *in Phys.* 42,24-8] Simplicius says that Parmenides got some to admit that the predication of 'is' (or of the essence) does not make multiplicity, while the predication of accidents does. [*in Phys.* 71,4-15]

Aristotle rejects these analyses quickly. Still they have significance, in light of his own analysis, where he makes the reverse move, and requires the introduction of an explicit 'is' by parsing other verbs: e.g., 'Socrates walks' becomes 'Socrates is walking'. Clearly, in his technical language, Aristotle wants all statements to contain 'is', an explicit assertion of being. Apparently he thinks that he can avoid the subject's becoming many through having those predicates specify different aspects or determinations of 'is'.

Continuing, Aristotle claims that, even if being were said in a single way, and it is impossible for there to be "the contradiction" [that there are both being and not being], still it is possible for not being to be: "For nothing prevents not being not being simply, but being a particular not-being." [187a5-6] Here Aristotle endorses Plato's claim that 'not being' should be taken to indicate a particular, existent object that is not a certain kind, but rather is another kind. [Simplicius, *in Phys.* 137,21] In this way, "not being is". Or, to reverse the phrasing, Aristotle admits that some subjects "are not". However, they "are not", not without qualification (*ἀπλῶς*), but in a

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<sup>58</sup> Lycophron was a student of Gorgias. Ernst Zeller, *Philosophie der Griechen*, Vol. I, p. 1323. Cf. Simplicius, *in Phys.* 91,4-26. Note the similarity to the Arabic nominal sentence.

<sup>59</sup> *in Phys.* 43,10-2. Alexander, *in Top.* 137,25-8, discusses making 'man' into a verb as in 'Socrates mans'.

particular respect ( $\pi$ ). So ‘a dog is not’ means that ‘a dog is not a cow [say]’. Again, he distinguishes “not being in general” (“ὅλως μὴ ὄν”) from “not being something” (“ $\pi$  μὴ ὄν”). [186b9-10] Here ‘ἀπλῶς’ once more indicates the absence of a further specification of ‘being’ or ‘is’. Once again, Aristotle insists that ‘is not’, by itself, is incomplete and needs further determination.

So Aristotle sees no need to eliminate ‘is’. Rather, he celebrates its presence. As I have said, Aristotle accuses Parmenides of sophistry in the way that he derived his contradiction of “is and is not”. Aristotle classifies this error as the fallacy of *secundum quid et simpliciter*. This fallacy concerns inferences from *tertium adiacens* (‘S is P’) to *secundum adiacens* (‘S is’). Aristotle assumes that in most cases ‘S is P’ implies ‘S is’, and ‘S is not P’ does not imply ‘S is not’. But he recognizes exceptions:

E.g., if what is not is believable, [then] what is not is... Or again that what is not is not a being, if it is not some being, e.g., if it is not a man. [*Soph. El.* 167a1-4]

As we shall see, the fallacy comes about confusing an assertion of *per se* being with an assertion of *per accidens* being, in the sense given in *Metaphysics* V.7. Assertions of being *per se* must contain only names and verbs signifying items in the categories; but ‘believable’ is not such a term; hence ‘what is not is believable’ does not imply ‘what is not is’. Again, as with Plato, if S is not P (sc., ‘not-P’), in a statement of being *per se*, S is. E.g., ‘the dog is not asleep (sc., ‘not-asleep’); therefore, the dog is’ commits no fallacy.

Aristotle criticizes Parmenides for identifying ‘being’ (‘τὸ ὄν’) with ‘just what is being’ (‘ὅπερ ὄν’), as well as with ‘just what is one’ (‘ὅπερ ἓν’). [186a31-4] Parmenides has to do this, Aristotle says, in order to avoid the existence of plurality. Aristotle argues that Parmenides cannot make this assumption while asserting also that being is said in a single way, without contradicting himself. [186a34-b12] As Philoponus puts it,

...for, if substance (οὐσία) is just what is being, and substance is also white [or: one], and white is not being, then just what is being is also not being.” [*in Phys.* 70,17-9]

We have seen these ‘ὅπερ’ constructions already in looking at Plato: they indicate the essence of the subject. [cf. *Top.* 116a23]<sup>60</sup> But, Aristotle says,

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<sup>60</sup> Alexander, in *An. Pr.* 363,10; 373,20-2; Allan Durbanas, “On ‘Essentially’ (ὅπερ) in Aristotle,” p. 101. The *ὅπερ* construction indicates identity: essential predications of generic or specific identity, or necessary connections between subject and predicate that are neither essential nor accidental, i.e., numerical or indeterminate identity. Also cf. Alan Code,

the essence of the subject is given by a definition. Definitions have parts: genus and difference. So, e.g., a human being as 'just what is some being' ('ὅπερ ὅν τι'). What a human being is is just rational animal. He then claims that since the definition of 'human being' has parts, each of those parts too will be "just what is some being". But then Parmenides once more cannot maintain that being is said in a single way, and that all are one. [186b14-35]

Above, I have pointed out that Parmenides and Plato have problems handling the 'is' in 'Being is just what is being.' Parmenides has the problem of that 'is' harboring some sort of plurality. Plato says that this 'is' indicates participation in Being. But then he has difficulty with 'Being is'. If we take Aristotle to have an existential reading of 'is', he has little problem: what something *is* is just what it *exists as*. Like the 'τι μὴ ὅν' construction, the 'ὅπερ ὅν τι' construction suggests that 'ὅν' ('being'), or 'ἔστιν' ('is'), can, and should, be qualified further: to be is to be something, and that more than one qualification is possible.

Thus Aristotle is claiming that statements of *secundum adiacens*, of the form, 'S is (not)', where 'is' expresses a predication of being *per se*, may be specified further, as 'S is (not) P', for some categorematic 'P'. When 'is' is *per accidens*, this result need not follow. Rather, the fallacy of *secundum quid ad simpliciter* occurs. We have then here a fairly strong adumbration of the aspect theory of predication: simple affirmations normally assert existence, and require specification by more particular respects. Here, in the context of dealing with Parmenides' arguments, Aristotle, like Plato, takes denials normally to assert that something does not exist in a particular respect, i.e., that the subject is not a particular kind of thing. We shall see Aristotle continuing to assert this view about statements containing a substantive or a privative ('not-P) in his treatment of the negation of statements, especially in his treatment of metathetic predication: that S is not P normally asserts that S exists but is other than P. (Still, what he has said here does not rule out another possibility, that the denial negates the entire corresponding affirmation.)

In sum, what Aristotle says in these texts from the *Physics* appears quite congenial to the aspect theory. We shall have to look at other texts of Aristotle, in order to see whether they too agree and are consistent with one another.

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"Aristotle: Essence and Accident," pp. 412; 430, on Grice's notion of 'Is' which describes 'just what a thing "is"' by definition. On my translation of ('ὅπερ ὅν τι'), cf. Hermann Weidemann, "In Defense of Aristotle's Theory of Predication," p. 78; Simplicius, in *Phys.* 122.25ff.

*Summary*

In this chapter I have looked at some texts dealing with predication by Parmenides, Plato, and Aristotle. In this tradition, at least up to Aristotle, 'is' is taken to have a single, fused sense, of stating existence or real presence of the subject with its attribute. At any rate, Aristotle could have understood his predecessors thus. This result agrees with the linguistic evidence discussed in Chapter One. Opposing Parmenides, Plato developed a view where a claim of being, of 'is', implies further specification involving a combination of different Forms. So too Plato takes a simple denial, 'S is not' to involve a combination of S with the Forms of Difference and Being and to imply further determination as a particular kind of being. Accordingly, 'not being' signifies a particular Form or kind of thing, namely, what is contrary to Being. Plato generally read 'S is not P' as the metathetic 'S is not-P'. For the most part, Aristotle follows Plato's lead, but complicates the discussion with such claims as "being is said in many ways", his critique of 'just what is', and his analysis of inferences of *secundum quid et simpliciter*.

## CHAPTER THREE

### ARISTOTLE ON THE USES OF ‘BE’ IN GREEK

Being a self-conscious philosopher, Aristotle not only uses ‘be’ (‘εἶναι’) in various of its grammatical forms but also makes remarks about its usage. Aristotle is offering his insights about the use and formal structure of ancient Greek, in both its ordinary and its philosophical modes. Some of these remarks have bearing on the logical structure of predication, but not all in the same way. Accordingly, I shall have to sort out and classify the different types of distinctions Aristotle makes about ‘be’ and its grammatical variants. In this chapter I shall concentrate on the linguistic issue, whether the aspect theory of predication agrees with those remarks that Aristotle makes concerning Greek linguistic usage. In later chapters, I shall deal more extensively with the logical issues and discuss more fully how Aristotle modifies the usage of ‘be’ to suit his own views.

#### *Being is Said in Many Ways*

Aristotle distinguishes different types of being and different significations of being here and there in his corpus. His pronouncements about the usage of ‘be’ begin typically with “being is said in many ways” (Τὸ ὄν λέγεται πολλαχῶς). [*Metaph.* 1003a33; 1017a6; 1028a1; *Eth. Nic.* 1096a23-4; *Eth. Eud.* 1217b25-6] But these pronouncements do not focus upon a single topic. Rather, from a modern perspective at any rate, Aristotle makes distinctions of being on many different levels, and, in some passages, appears to conflate those levels. How many and what sorts of levels are distinguished is somewhat arbitrary and depends upon theoretical assumptions. Yet it is not completely anachronistic to make such distinctions. After all, Aristotle himself likes to assign parts of being to different special sciences. [*Metaph.* 1003a23-6] For my purposes, it will be convenient to distinguish the following levels: 1) a *semantic* level, where Aristotle gives the *extension* (“signification”) of ‘be’ (in its various grammatical forms), by listing the sorts of objects that have being 2) a *syntactic* level, where Aristotle gives *inference patterns and truth conditions* for statements containing ‘be’ 3) an *intensional* level, where he gives the various senses of ‘be’ by discussing the meaning of ‘be’ in Greek 4) a *grammatical* level, where he discusses how ‘be’ functions so as to make a sequence of words into a complete sentence, and so in effect gives *formation rules for wffs* containing ‘be’. A

theory of predication will focus on the syntactic and semantic levels. After all, logic consists of syntax and (formal) semantics.<sup>1</sup> Still, the intensional and grammatical levels have some relevance. Here I shall focus on with the intensional level, where Aristotle discusses meanings of ‘be’.

However, as I have noted, first we must sort the various passages where Aristotle makes remarks and distinctions about ‘be’ into the various levels. I shall not be encyclopedic, but shall give a representative sample of the different levels that I have distinguished.

1) Often Aristotle is concerned to distinguish different types of “significations” of ‘being’. In this way he says, in *Metaphysics* VII.1, that ‘being’ or ‘that which is’ (‘τὸ ὄν’) may “signify” (‘σημαίνει’) a substance or a quantity or a quality etc. [1028a2] Here ‘signify’ seems to be used in its original sense of ‘being a sign for’.<sup>2</sup> In this sense, when Aristotle lists the significations of ‘being’, he gives a list of the sorts of objects that have being and hence a list of objects to which that word may refer. He does not thereby list meanings of ‘being’, in the sense of giving definitions or synonyms. As ‘being’ (‘τὸ ὄν’) is a substantive, Aristotle rather appropriately concentrates on the semantic question of what things are described by that substantive expression.

2) Again using the substantive ‘being’, but in the plural (τὰ ὄντα), Aristotle gives the fourfold distinction of the ontological square in *Categories* 2. He says that “some beings are said of some subject but are in no subject...others are in a subject but are said of no subject...” and so forth. [1a20-4] Once more the focus is semantic: Aristotle is classifying objects in terms of what sort of predication relations they satisfy. Yet he is also making a syntactic distinction between two sorts of predication relation, ‘being said of’ and ‘being in’, each of which can be represented by ‘is’. These relations have different formal properties: e.g., when the predicate is “said of” a subject, the definition of that predicate may be predicated truly (“said of”) of the subject also, whereas, when the predicate is “in” a subject, its definition may not be so predicated. [*Cat.* 2a19-21] Thus Aristotle makes a syntactic distinction here, which I shall discuss further in later chapters.

3) In *Metaphysics* V.7, he says that ‘be’ (‘εἶναι’) and ‘being’ (‘τὸ ὄν’) may “signify” what is said in act or in potency. [1017a35-b2] But here he

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<sup>1</sup> On making such distinctions, cf. John Cook Wilson, *Statement and Inference*, Vol. 1, p. 124.

<sup>2</sup> T. H. Irwin, “Aristotle’s Concept of Signification,” pp. 242-6. See Mark Wheeler, “Semantics in Aristotle’s *Organon*,” for a review and critique of the various interpretations of Aristotle’s concept of signification. I generally agree with his views, pp. 194; 209-11, except for his attributing a modern concept of sense to Aristotle.

is not listing sorts of things that may be said to be. Rather, he is making a claim about different meanings of 'be'. For instance, 'Socrates is brave' has an ambiguity: it may be describing Socrates' acting bravely right now, or it may be describing his moral character. In the latter case, the statement is making a claim in potency, that Socrates has the ability to act bravely if the occasion should arise. Here Aristotle is not listing different things that have being, but describing different claims that a simple statement with 'is' may make. He offers paraphrases of those different claims, and analyzes their differences in meaning. So Aristotle is distinguishing meanings of 'being' ('τὸ ὄν') as it functions in sentences.

4) Aristotle also discusses how 'is' is used to make a single statement out of many words. [*Int.* 16b28-9; 17a11-2] To make a statement requires not only a substantive term, but, further, an indicative tense of 'be' or another verb containing that. In this way name and verb are interwoven to make a statement. Surely Aristotle thinks that these features of 'be' have more importance than being grammatical observations about Greek. Still, they do make some observations about Greek grammar, observations that do not seem to hold for all natural languages, e.g., Arabic, as we have seen in Chapter One. In such passages Aristotle then is seeking out conditions necessary for a statement to be well formed, or "intelligible" as he would put it ('οὐκ ἄτοπον' [*Int.* 20b37]; 'συνετόν' [*An. Pr.* 49a22]).

The texts just enumerated illustrate how Aristotle discusses distinctions of 'be' in its various forms on different levels. In these discussions Aristotle does not distinguish too sharply between the different forms of the verb 'to be': 'is' ('ἔστι'), 'to be' or 'be' ('εἶναι'), and 'being' or 'that which is' ('τὸ ὄν'). To be sure, he does make some moves in that direction. As we have seen, Aristotle, appropriately, takes 'being', as it is a substantive, 'that which is', to be concerned with the sorts of things that have being, and then lists the categories of being. Again, he takes 'is' generally to be concerned with predicative functions in a statement. However, he tends to disregard these differences with 'be', especially in the *Metaphysics* V text, and above all with 'being'. Perhaps he does so mainly because he is merely cataloging current usage. But, whatever the cause, Aristotle's remarks about how being may be said and may signify do not distinguish sharply among the various respects, grammatical, syntactic, intensional, semantic, of the usage of 'be', although he does make a sharper distinction at *On Interpretation* 16b22-4. Probably making these distinctions too finely creates anachronisms here. Rather, to put this point in reverse, Aristotle's own work was instrumental in the creation of these very distinctions, and, in such pioneering efforts, we should expect some obscurity. But too, I shall argue, the aspect theory has the virtue of showing why Aristotle, holding it, would tend to unify various levels. Still, for our understanding, it is useful to distinguish different levels of doctrines about the use of 'be'. As some of



his remarks clearly have more bearing on some of these concerns than upon others of them, I shall concentrate on different texts in different chapters.

Here I focus on the import of his remarks upon the linguistic issues dealt with in Chapter One. These issues concern primarily the intensional and secondarily the grammatical levels. I shall be addressing mainly the questions: 1) what views does Aristotle express about the meaning of ‘be’ in Greek? 2) are these views consistent with his following the aspect theory of predication?

### *Aristotle’s Lexicon for Being*

Appropriately enough in his philosophical lexicon of *Metaphysics* V, Aristotle distinguishes “significations” of ‘is’ in Chapter 7.<sup>3</sup> The distinctions made there do not concern meaning alone. They also function on other levels, e.g., through cataloging the types of things that are said to have being, on the semantic level. Such is the case with the second distinction made there, where Aristotle says that those that are said *per se* are said in as many ways as there are categories. [1017a22-3] This is the same distinction made at *Metaphysics* VII.1. [1028a2] Yet the lexicon is largely concerned with distinguishing meanings, and even that ontological distinction is made in a context relating it to meanings of ‘be’.

In this section I shall give a general interpretation of *Metaphysics* V.7. In following sections I shall consider in more detail the distinctions made there.

*Metaphysics* V is a lexicon in the sense of a philosophical wordbook, where Aristotle is listing and analyzing meanings of important words in current philosophical use. If the content of chapter 7, on ‘be’, creates some doubt about this claim, as we shall see it does, still surely it is supported by a majority of the chapters in this book. E.g., Aristotle discusses ‘origin’ (‘ἀρχή’) in chapter 1, and distinguishes various meanings of it. These distinctions have use if we seek to interpret what someone means by advocating something as an origin or principle of something else. What sort of ἀρχή? One that is most intelligible to us and so heuristically best? [1013a1-4] Or one which is most intelligible in itself, and so epistemically best? [1013a14-6] Or an origin in time? [1013a7-10] And so forth. Such dis-

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<sup>3</sup> Strictly, Aristotle holds that written expressions signify spoken ones, and these the thoughts, which are likenesses of objects. [*Int.* 16a3-9] So he is listing significations or meanings of thoughts. Even ‘goat-stag’ signifies something, sc. in the mind. [*Int.* 16a16-7] Hence he does not have to stick too closely to actual spoken or written languages.

tinctions would be useful in interpreting what a philosopher is claiming in a statement about ἀρχαί.

It is plausible to suppose that chapter 7, on 'be', has the same function. Indeed, it follows a chapter on 'one', where clearly some of the distinctions concern meaning. There Aristotle distinguishes 'one in number' from 'one in species'. [1016b31-2] This distinction helps to interpret a claim like 'Socrates and Plato are one': for they are the same in species, but differ in number. [1018a4-5] We should expect the same from the chapter on 'be'.

Note that, if you compare the meanings of 'be' enumerated by Aristotle with those enumerated in a Greek lexicon, Aristotle has an impoverished list. For instance, he does not discuss the construction of 'εἶναι' with a noun in the dative to indicate possession. Thus, Aristotle seems not to be interested in listing the current uses of 'be' in ordinary Greek. Rather, he is collecting and codifying uses of 'be' that have had philosophical prominence.

Also note that in his lexicon Aristotle does not expect the meanings that he distinguishes for various terms to be mutually exclusive. On the contrary, he recognizes that they overlap. For instance, he says that what is one in number must be one in species, whereas being one in species allows for, but does not require, being one in number. [1016b35-6] Similar relationships hold between the senses of 'be' that he distinguishes. Still, Aristotle does sometimes seem to expect, in making, say, a twofold distinction, that, if something can be one or the other, then, if it is not one, it is the other.

Aristotle himself links 'one' and 'being' closely: he asserts that "...being ('τὸ ὄν') and one are the same and a single nature through following from one another as cause and principle, but not as indicated by a single account...so there must be as many species of being as of the one." [1003b22-34] Hence it is likely that the distinctions of meaning that Aristotle makes for 'be' will have some structural similarity with those for 'one'. He perhaps goes too far when he says, "Being and one are said in an equal number of ways." [1053b25] At any rate that much isomorphism does not appear in *Metaphysics* V.6 & 7.

Nevertheless, the similarity of distinctions of meanings for 'be' and 'one' is apparent in the first two distinctions that Aristotle makes for each, into what is said to be or to be one *per accidens* versus *per se*. Some features of Aristotle's views on 'one' in these two senses will help my interpretation of his views on 'be'.

The discussion of 'one *per accidens*' largely parallels what Aristotle says about 'be *per accidens*'. Yet, Aristotle's doctrine on 'one *per se*' diverges widely, in length as well in the number and content of subdistinctions made, from his doctrine on 'be *per se*'. My point however concerns a general similarity. When Aristotle discusses 'one *per se*' (καθ' αὐτό), he has to be using '*per se*' in a sense other than his own technical sense of '*per*

*se*' as 'essential', as detailed in *Posterior Analytics* I.4 and *Metaphysics* V.18. For the mere continuity of sticks tied up in a bundle suffices for a unity *per se*, Aristotle says. [1015b36-1016a1] To be sure, some of the later subdistinctions of the meanings of 'one *per se*' do agree with Aristotle's technical use of '*per se*': e.g., those that are one because of a necessary connection between their definitions. [1016a32-5] Aristotle also points out, in another subdistinction, that being a mere bundle of sticks would not count as one *per se* in another sense. [1016b11-7] But here I wish to point out only that Aristotle is allowing for terms like '*per se*' ('καθ' αὐτό') to have a much looser meaning that he himself would allow in his own work.<sup>4</sup> Indeed, what Aristotle does in his own inquiries is often to start from these looser meanings of terms in common philosophical practice, which for him constitute part of the *endoxa*, and then argue for their restriction. So too I shall be claiming that the doctrine on 'be *per se*' also requires a loose sense of '*per se*'.

Let me extract one final point from the comparison of 'be' with 'one'. When Aristotle links them together, and claims that they have the same species or even the same meanings, he remarks, "For 'one man' and 'man', and 'man' and 'existent (ὄν) man', are the same, and 'one man' and 'one existent man' do not indicate something different in virtue of the reduplicated expression." [1003b26-9] Again Aristotle links 'one' and 'be'. But too, he suggests that 'be', in the sense of 'existent', is contained already in a term like 'man'. Certain terms then, according to this remark, seem to carry their existence around with them in virtue of their very presence or meaning. Which sorts of terms do that? Apparently substance terms do, but too, so I shall suggest, so does any term from any of the ten categories. These terms describe things that Aristotle will claim in chapter 7 to have being *per se*. It is important to note that the presence of such a term does not make the existence claim as such. Rather, it makes the existence claim true.

In addition to 'be *per accidens*' and 'be *per se*', Aristotle also discusses an alethic and a problematic use of 'is'. I have already mentioned both, notably the latter, in Chapter One, and shall discuss them further below. However, some scholars claim that ancient Greek does not have one or both of these uses. Let me address this issue here.

Many have wondered whether the alethic and the problematic uses of 'be' in fact occur in the colloquial Greek of Aristotle's time. But that is not my main concern here. More to the point, clearly Aristotle recognizes such uses and offers theoretical remarks about them. As he does so in his philo-

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<sup>4</sup> Not always: sometimes Aristotle uses this looser sense: cf. his use of 'καθ' αὐτά' to mean 'by themselves alone' at *On Interpretation* 20a1, although his own use is more strictly defined at *Posterior Analytics* I.4.

sophical lexicon, *Metaphysics* V, he probably is not making up any new uses for 'be', but rather is recording actual uses of it, probably by Greek philosophers. A good candidate for a previous Greek who uses 'be' in the both the alethic and the problematic senses is Plato: in the *Sophist*, Plato describes the true as "ὄντως ὄν", what is really. [240b7] Again, the Stranger offers the definition for everything that is really (ὄντως εἶναι), and defines beings (τὰ ὄντα) as being nothing other than power (δύναμις), i.e., the possibility of affecting others. [247e3-4] Perhaps those philosophers, like Aristotle, are distorting or stretching common usage, as indeed philosophers are wont to do. But, again, my present discussion of the linguistic issues concerns Aristotle's philosophical use, and theory of that use, of 'is' more than ordinary usage. So I focus more on whether these uses of 'is', cataloged and distinguished by Aristotle, are compatible with the aspect theory of predication than on whether they agree with ordinary Greek usage. I shall claim that the aspect theory of predication can cover them, including the more controversial alethic and problematic meanings of 'is' explicitly recognized by Aristotle.

### *Being Per Accidens*

In discussing the ways in which being is said, Aristotle first distinguishes "that which is is said to be sometimes in virtue of an accident [be *per accidens*] and sometimes in virtue of itself [be *per se*]." [1017a7-8] At first glance, he seems to be distinguishing essential and accidental predication. This distinction would then appear to concern syntactic features, such as the transitivity of predication. But Aristotle ignores these features, which he discusses elsewhere,<sup>5</sup> to concentrate on meaning. Here he offers paraphrases of various statements containing 'is', in terms of what they talk about.

Indeed, his examples make it clear that he is not distinguishing accidental from essential predication here.<sup>6</sup> For he uses 'man is walking' as an example of being *per se*. [1017a29] I have already suggested that Aristotle uses '*per se*' ('καθ' αὐτό') in speaking of unities in a much looser sense than his usual, technical one. Indeed, this loose sense, namely, of 'by itself'

<sup>5</sup> E.g., *On Interpretation* 11; *Categories* 3, and the various passages on the fallacy of accident, to be discussed below.

<sup>6</sup> Franz Brentano, *Von der mannigfachen Bedeutung des Seienden nach Aristoteles* p. 13 [trans. R. George, p. 8]. W. D. Ross, *Aristotle's Metaphysics*, apud *Metaph.* V.7, takes Aristotle to be distinguishing accidental from essential predication. Cf. Michael Frede, "Categories in Aristotle," p. 41 ("A.7, a most obscure chapter").

seems to follow Plato's usage in the *Sophist*.<sup>7</sup> I emphasize that, when Aristotle distinguishes being *per se* and being *per accidens* here, this distinction differs from essential and accidental predication. Rather, he is making another distinction. Keeping these two distinctions apart will have great importance for my interpretation of Aristotle.

Let me begin by considering what Aristotle says about being *per accidens*:

Being is said sometimes *per accidens*, and sometimes *per se*; *per accidens* as when we say that the just one is musical and man is musical and the musical one is a man—resembling your saying that the musical one builds because it has happened to the builder to be musical or to the musical one to build (for that that is this signifies that this has happened to that)—and so too in the examples mentioned: for when we say a man is musical and the musical one is a man, or the white one is musical or this is white, in the first cases we say that both are accidental to the same thing, and in the latter that it has happened to a being, while with 'the musical one is a man' [we are saying] that the musical has happened to this. (So too it is said that the not-white is, because that to which it is accidental is.) Thus those are said *per accidens* in this way either for the reason that both belong to the same being, or that it belongs to that being, or that that of which it is predicated, to which it belongs, is. [1017a7-22]

Here Aristotle recognizes different sorts of being *per accidens*, but then assimilates them. Being is said *per accidens* 1) when an accident is predicated of substance, or 2) when a substance is predicated of an accident, or 3) when one accident is predicated of another accident. In the latter case, (3a) the two accidents may both be accidents of the same subject, where that subject is a substance. [1017a15-22]

Aristotle does not allow for the other possibility, that (3b) one of the two accidents may be an accident of a substantial subject, and the other an accident of the first accident, as he does elsewhere. [*Int.* 21a9] Perhaps he does not do so because he holds that this case (3b) will collapse into the other (3a).<sup>8</sup> Indeed that will happen if, as Aristotle thinks, accidents cannot be self-subsistent subjects, but instead presuppose a substantial subject when they are put in subject position. [1031b22-3] Then 'the just is musical' means 'the just (thing/Socrates) is musical', and so both accidents would belong to the same subject. Another point is that these two cases (3a

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<sup>7</sup> Simplicius, in *Phys.* 96,25-8, says that Eudemus says that for Plato an accidental predication of 'is' does not indicate participation in being. Here would be an origin for 'being *per accidens*'.

<sup>8</sup> Franz Brentano, *Von der mannigfachen Bedeutung des Seienden nach Aristoteles*, p. 16 [trans. R. George, p. 12].

& 3b) do not differ unless accidents are allowed to have special properties that their substances do not have. This happens regularly with predicates of second intention, like ‘accident’. But Aristotle never worries about such sequences as ‘Socrates is just, and just is an accident’, even when discussing the fallacy of accident.<sup>9</sup> Also he does not worry here about any other possible such cases having intentional predicates, like ‘Socrates is a home-builder, and homebuilders are useful’.<sup>10</sup> So, perhaps because of his limited domain of predicates, Aristotle does not recognize case 3b.

At any rate, Aristotle’s examples for the three types of cases that he does recognize include: 1) ‘the man is musical’ 2) ‘the musical is a man’ 3) ‘the just is musical’, taken in the sense of ‘the thing that is just is musical’

Aristotle then offers a paraphrase that fits all these cases. The paraphrase proceeds in two steps: 1) restate the sentence in the form of affirming a relation of accidental being to hold between the subject and the predicate terms 2) then assert that that which has the accident “is”: ‘S is P’ thus becomes ‘P is accidental to S, and S is’ (‘P’ and ‘S’ might be switched here).

Aristotle gives the first part of this paraphrase when he says, “For that this is that signifies that this has happened (συμβεβηκέναι) to that.” [1017a12-3] ‘Συμβεβηκέναι’ (‘has happened’) might also be translated ‘is accidental’, as Aristotle’s technical word for ‘accident’ is ‘συμβεβηκός’. Thus, ‘the man is musical’ means ‘musical is accidental to the man’; ‘the musical is a man’ means ‘a man is accidental to the musical’; ‘the just is musical’ means ‘musical is accidental to the just’.

Note that these paraphrases generally invert the subject-predicate word order. (Indeed, as I shall discuss, Aristotle regularly inverts the word order with the ‘ὑπάρχει’ construction.) E.g., ‘man is musical’ becomes ‘musical is accidental to white’. However, here, Aristotle’s paraphrases invert word order in virtue of the meaning, as construed via his ontology, and not in virtue of the original word order. So ‘the musical is a man’ becomes ‘musical is accidental to man’, and not ‘man is accidental to musical’, because Aristotle considers man a substance and hence the real subject. [1017a17-8] I have indicated this by noting in my schematization that ‘S’ and ‘P’ may be switched.<sup>11</sup>

<sup>9</sup> Maybe at *Categories* 1b10-1 he has such examples in mind, but he never discusses them. See Chapter Eight.

<sup>10</sup> He does so a bit at *Topics* 116b1-3 and *On Interpretation* 11.

<sup>11</sup> We may have some doubts whether the “meaning” here is intensional, instead of semantic. For Aristotle surely is laying out what there must be in order for a statement of accidental predication to be true: the accidents described by the accidental terms and functioning as accidents, and also their subject, even if the subject is not explicitly referred to in the

Moreover, that Aristotle analyzes ‘the musical is a man’ as ‘musical is accidental to man’ indicates that he is using ‘is accidental to’ here in his sense of ‘accident’. Otherwise we might take ‘is accidental to’, like ‘belongs to’ (‘ὕπάρχει’), merely to indicate any predication whatever. But then Aristotle would have no need to invert subject and predicate in analyzing ‘the musical is a man’. Aristotle does so because ‘man’ signifies a substance, and ‘musical’ an accident, which can come and go, while the substance remains the same. Thus at 1017a12-3 he indicates that being *per accidens* must be signified by an accidental predication.

In the second stage of the paraphrase, we are to assert that the subject of the accidental predication, as determined in the first stage, “is”. For instance, Aristotle parses ‘a man is musical’ as “it is accidental to that which is” [1017a16]; i.e., as ‘musical is accidental to the man who is’. He uses this same structure several other times. [1017a19-21]

What might this assertion that the subject “is”, e.g., that man is, mean? The ‘is’ here asserts being *per se* and not *per accidens*. For in his discussion of Parmenides in *Physics* I.3, as we have seen in Chapter Two, Aristotle tends to describe ‘that which is’ both as ‘being without further qualification’ (ἀπλῶς) and as ‘being *per se*’ (καθ’ αὐτό). So in his analysis of being *per accidens* Aristotle is claiming that everything said to be *per accidens* depends upon something said to be *per se*. The point is that some things have being *per accidens*, because they are predicated accidentally of subjects that “are”. In this sense even the not-white is, Aristotle says. For a crow is not white. Hence ‘not-white’ is predicated accidentally of crow, and a crow “is”. Not-white has being, not *per se* but only *per accidens*, through its relation to its subject, crow, which “is” *per se*. ‘Be *per se*’ should be taken here in the sense of ‘*per se*’ used in the *Sophist*: having being in its own right as opposed to having being solely in relation to another.<sup>12</sup> For to have relational being requires a prior, non-relational being that may be related. Now for something to have being in its own right for Plato means, I have suggested, that that thing participates in Being, and not in some complex of which Being forms only a part. In non-Platonist terms,

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statement by a term. A statement of accidental predication then “signifies”, in the sense of ‘is a sign of’, certain items, accidents and a substance, existing in certain relations.

All this is so, but does not rule out Aristotle’s offering a paraphrase of the meaning of the statement through describing what claims it is making. Since ‘is’ may be taken in various ways, the substitution of such a description for the original sentence provides more clarity and less ambiguity, while preserving the meaning of the original. Aristotle also inverts the grammatical order in his doctrine of unnatural predication, to be discussed in Chapter Six.

<sup>12</sup> Also, being *per accidens* expresses no real existence but expresses the sense in which ‘not-being is’. Aristotle connects this claim with sophistry and with Plato’s *Sophist*. Franz Brentano, *Von der mannigfachen Bedeutung des Seienden nach Aristoteles*, p. 16 [trans. R. George, p. 12].

this means that what is *per se* has being, or exists, simply, without qualification. What Aristotle proceeds to say supports this interpretation, as he will say that being *per se* is said in as many ways that there are categories. Thus a quality is *per se*, in this sense, just as much as a substance is *per se*: for both exist in their own right, as things that can be related. Aristotle is not using his more usual, technical meaning of *per se*, according to which one term, usually the predicate, appears in the definition of the other, and so makes the predication necessary. Rather, Aristotle is saying that what is *per accidens* does not exist in its own right, but is an accident of what exists in its own right. We have seen Plato and Aristotle making this point repeatedly in discussions of the not-being of Parmenides.<sup>13</sup>

Aristotle himself notes that ‘the not white is’ is also an assertion of being *per accidens*, and that it asserts that that to which the not white is accidental is (i.e., is *per se*). [1017a18-9; 1069a23-4] Like Plato, Aristotle regularly takes ‘not being’ particularly, to signify some particular not being, i.e., something that is not this or that. In *Physics* I.3 he takes an assertion like ‘the not-white is’ not simply, but as demanding a further specification. So a being *per accidens* cannot support, strictly speaking, a simple statement of ‘is’, or existence. Rather, it indicates something that has being solely in relation to another. Not-white is, but not *per se*, but *per accidens*. Still the particular being that is not-white is *per se*. So that “something” will be a being *per se*. Thus, the not white is, because the log is not white, and the log is.

I propose that Aristotle is using ‘that which is’ in the parsing to make an explicit existence claim, sc., he is claiming that a statement of accidental predication asserts the existence of a substantial subject for the accidents mentioned, even if that subject is not explicitly mentioned in that statement. Thus, Aristotle is parsing ‘a man is musical’ as ‘musical is accidental to a man, and that man exists’. In the case where the substance is not explicitly mentioned, the parsing is more complicated, and assumes knowledge beyond what is stated explicitly. E.g., ‘just is musical’ means ‘just is accidental to a substance/man, and musical is accidental to that same substance/man, and that substance/man exists’. This existence, unlike being *per accidens*, stands on its own. True, being *per se* may be specified further, by accidents as well as by specifying its nature. But since for Aristotle a substance is “just what” its essence is, it exists in its own right.

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<sup>13</sup> Likewise Frank Lewis, *Substance and Predication in Aristotle*, pp. 233-4, analyzes ‘S comes to be P *per accidens*’: the subject is *per accidens* something that is P *per se*. Michael Loux, “Aristotle and Parmenides: An Interpretation of *Physics* A8,” pp. 308-10, critiques this account.



Thus I offer this text, in particular, this use of ‘that which is’ (τὸ ὄν) as a piece of evidence that Aristotle holds the aspect theory of predication. For, first, Aristotle takes an affirmation of accidental predication, like ‘man is musical’, to assert that its logical subject exists, and has the accident or accidents predicated of it. Second, an affirmation of being *per se*, without further qualification, asserts the real existence of the subject. Again, let me emphasize that being *per accidens* differs from the being of accidents and from accidental predication. Moreover, I shall claim, Aristotle uses this sense of ‘being *per accidens*’ in naming the fallacy of “accident” and in his notion of accidental being for which there is no science of being *qua* being, as well as in *On Interpretation* 11.

### *Being Per Se*

We shall see this interpretation reinforced by what Aristotle says about being *per se* (καθ’ αὐτό):

Those are said to be *per se* in as many ways as the figures of the categories signify. Whatever the figures of predication signify are said to be *per se*: for ‘be’ (εἶναι) signifies in as many ways as they are said. Thus since some predicates signify what it is (τί ἐστι), and others the *quale*, and others the *quantum*, and others the in-relation-to-which, and others acting or being acted upon, others the where, and others the when, ‘be’ signifies the same as each of these: for ‘man is healing’ differs in no way from ‘man heals’, nor ‘man is walking or is cutting’ from ‘man walks’ or ‘[man] cuts’, and likewise for all the others. [1017a22-31]<sup>14</sup>

Aristotle cannot here be contrasting essential predication with accidental predication.<sup>15</sup> For he says that statements with predicates in any category are said to be *per se*.<sup>16</sup> That is, in a true statement of form ‘S is P’, where ‘P’ signifies an item in any category (given that “what it is” indicates the

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<sup>14</sup> I translate ‘ὑγιαίνει’ (‘is healthy’) as ‘heals’ so as to have a single word in English corresponding to it. I recognize that the translation is not an accurate one.

<sup>15</sup> David Bostock, trans. & comm., *Aristotle’s Metaphysics: Books Z and H*, p. 48, says, “So apparently ‘to be’ must here mean ‘to exist’, and there is after all no concern with the ‘is’ that appears in an essential predication.” W. Thorp, “Aristotle’s Use of Categories,” p. 252, claims that Aristotle does not recognize an existential sense of ‘be’ at all in this chapter. He claims that ‘be *per se*’ is essential predication, but at the cost of taking ‘Socrates is walking’ to be an essential predication, and having to parse it as ‘Socrates is capable of walking’. Hardly convincing, especially since a quadriplegic is still human.

<sup>16</sup> Pace Michael Baumer, “Chasing Aristotle’s Categories,” pp. 345-6.

category of substance<sup>17</sup>), S is said to be *per se*. Thus, statements that make claims about being *per se* may make either essential or accidental predications.<sup>18</sup> A statement like ‘a man walks’, with an accidental predication, is said to signify being *per se*. [1017a29-30] Consequently ‘be *per se*’ cannot mean what Aristotle means in his technical use of ‘καθ’ αὐτό’, in his doctrine of essential predication. As a result, I have been translating ‘τὸ ὄν [εἶναι] καθ’ αὐτό’ as ‘being *per se*’, so as not to confuse it with the essential predication, described in *Categories* 2 and *Posterior Analytics* I.4.<sup>19</sup>

Likewise, being *per accidens*, Aristotle says, describes the case where an accident is predicated of a substance or another accident. But then a statement like ‘a man is walking’, which Aristotle takes to exemplify being *per se*, counts also as an example of being *per accidens*. So, likewise, ‘being *per accidens*’ being cannot be identified with accidental predication. As I have mentioned, like the other types of being distinguished in *Metaphysics* V.7, being *per se* and being *per accidens* overlap.<sup>20</sup>

Despite their overlap, being *per se* and being *per accidens* are contradistinguished, but not as essential versus accidental predication. All those said to be *per accidens* have a relation of accident to substance. Aristotle holds that those said to be *per accidens* are said to be solely because something else is said to be. Thus, he says, “Also that the not-white is is said to be in this way, because that to which it is an accident is.” [1017a18-20] ‘The not-white is’ *per accidens*, because a crow is not-white, and a crow is,

<sup>17</sup> For in the *Topics* [103b27-9], Aristotle says that ‘τί ἐστι’ may signify any of the categories: substance (οὐσία), *quantum*,... However, at *Metaphysics* 1028a14-5, Aristotle says that the τί ἐστι, is just what signifies substance (ὅπερ σημαίνειν τὴν οὐσίαν). He then proceeds to recall the usage of ‘τί ἐστι’, where it signifies all the categories at 1028a15-8. (I discuss Michael Frede’s views below, in Chapter Five.)

I hazard the guess here that in the *Topics* Aristotle has an endoxic usage of ‘τί ἐστι’. For it does fit Plato’s use: e.g., what is the beautiful (τί ἐστι τὸ καλόν)? It is a *quale*. And likewise for the other categories. But in the *Metaphysics* Aristotle is moving away from the endoxic usage that he recorded in the *Topics* towards his own view. Thus ‘τί ἐστι’ comes to mean ‘substance’.

Yet *Metaphysics* V is transitional, as it too records current philosophical usage. So what does ‘τί ἐστι’ mean there? It can have the original endoxic meaning and still, when restricted to being *per se*, end up being restricted to the subject. With being *per se*, the subject is a substance, and so then the being *per se* will signify a substance, just because it signifies what that subject is. So, even if Aristotle does not shift his usage of ‘τί ἐστιν’ as I have suggested, still ‘τί ἐστι’ here means substance.

<sup>18</sup> Pace W. D. Ross, comm., *Aristotle’s Metaphysics*, et al. Cf. Christopher Kirwan, *Aristotle’s Metaphysics: Books Γ, Δ, Ε*, First Edition, p. 141.

<sup>19</sup> So too Christopher Kirwan, *Aristotle’s Metaphysics: Books Γ, Δ, Ε*, Second Edition, p. 40; David Bostock, trans. & comm., *Aristotle’s Metaphysics: Books Ζ and Η*, p. 48.

<sup>20</sup> Perhaps, despite the overlap, Aristotle holds that if something is not a being *per se*, it is a being *per accidens*, and *vice versa*. But perhaps not: for this does not hold with one in number and one in species or genus—unless we limit the subjects to what is one, somehow.

*per se*. Similarly, ‘white is’ *per accidens*, since Socrates is white, and Socrates is, *per se*. [Cf. 1070a22-3] But since ‘white’ signifies also an item in the category of quality, “white is *per se*” too. Thus, as the revised Oxford translation of “being in its own right” suggests, we may understand ‘being *per se*’ in this sense, that it is not said to be solely because something of which it is predicated is said to be [*per se*]. Hence we can read ‘Socrates is white’ as a statement of being *per se* as well as one of being *per accidens*. So being *per se* and being *per accidens* overlap, and are not contradistinguished as essential and accidental predication are.

From his example. ‘not-white is’, as well as from other texts [e.g., *Int.* 19b15-6], Aristotle clearly allows a statement of *secundum adiacens*, of form ‘S is’. To say that S is *per se* is to say that S really exists. In contrast, to say ‘not-white is’ or ‘not-being is’ because a goat-stag is not white or is not existent ( $\mu\eta\ \delta\upsilon\nu$ ) is a statement of being *per accidens*. Here it is not true to say that not-white or not-being really exists. So to say that S is *per accidens* is not to say that S really exists.

Aristotle says that every item in the categories—whatever the figures of predication signify—is said to be *per se*.<sup>21</sup> So. e.g., ‘Socrates is’; ‘Redness is’; ‘justice is’ etc. Aristotle then says that to be *per se* is said in as many ways as there are categories. That is, ‘S is’ signifies that S really exists, and, since Aristotle recognizes ten ultimate sorts of “beings”, or real existents, for S to really exist requires that S be a substance or a *quale* or a *quantum* etc. In parallel with his discussion of ‘be *per accidens*’ (as well as with his discussion of the other senses of ‘be’), Aristotle is making a claim about the meaning of ‘is’ in a statement like ‘Socrates is an animal’ or ‘a man is walking’: here ‘is’ signifies, or can signify, being *per se*—i.e., that ‘Socrates’ or ‘a man’ is *per se*, i.e., is in its own right. But too, in a statement of *tertium adiacens*, the additional claim is made that the subject has the attribute signified by the predicate. As with ‘be *per accidens*’ the predicate must be predicated of the subject, but now either “essentially” or “accidentally” in a categorial sense. In effect, for Aristotle every statement about what really exists must make an assertion of real existence, where that assertion must be able to be specified further by a predicate signifying an object in one of the categories: for the subject must be as a substance or *quantum* etc.<sup>22</sup>

<sup>21</sup> There may be some doubt about primary substances as Aristotle says that these are neither said of nor in a subject. But, as I discuss further in Chapter Six, Aristotle does at times allow for the predication of singulars. Cf. “Callias is Callias *per se*.” [*Metaph.* 1022a26-7] It is just that he “legislates” in view of his own theory.

<sup>22</sup> Cf. L. A. Kosman, “Predicating the Good,” p. 173: “When I say that Socrates is a man, this is to predicate of him a certain kind or sense of being, being what he is.” At 10942b25

This interpretation explains why Aristotle finds it important to mention the equivalence of statements like 'a man walks' and 'a man is walking'. For those of the former type do not make an explicit assertion of 'is' *per se*, while those of the latter type do. To accept their equivalence amounts to accepting that even a statement like 'a man walks' or 'Sue cuts the melon' make an assertion of real existence, that can be specified further, by an expression signifying an object in a category: a man is *per se* as walking—exists as a walking thing; Sue exists *per se* as a cutter of the melon.

In sum I am claiming here that in his discussion of being *per se* Aristotle is isolating a use of 'be'. This use of 'be' has the logical structure of the aspect theory of predication. 'S is *per se* P' has the following features: 1) P is *per se* 2) S is *per se* 3) P is predicated of S. If we read 'be' here as 'really exists', we can understand the doctrine; S and P really exist, as items in the categories, and for S to exist involves its being P. For Aristotle this use turns out to be the most important philosophical and scientific use of 'be'. He has indicated this preeminence by tying being *per se* to the categories, which classify "beings", i.e., those objects that have being *per se*, or really exist in their own right. These beings have interrelations. For instance, elsewhere Aristotle distinguishes their essential from their accidental ones. Science deals with these beings, especially with their essential relations and natures. But all those beings have the common structure of a single determination of being, with further determinations by categorical terms: existence with hooks.<sup>23</sup>

Aristotle does not mean to assert that being *per se* comes in ten ultimate types, i.e., that there are ten logical types of predication relations between items in the categories.<sup>24</sup> For he shows no indication of this in his syllogis-

Aristotle allows a threshold to be, by being a threshold, but then classifies a threshold into the category of position.

Basically, this is G. E. L. Owen's position in "Aristotle on the Snares of Ontology," p. 82 n. 14. H. P. Grice, "Aristotle on the Multiplicity of Being," p. 180, rejects this existential interpretation for a copulative one. He does so mostly on the remark of 1017a27-30 on the equivalence of 'S walks' and 'S is walking'. Grice then attacks Owen for making mistakes concerning existential presupposition his distinction of two types of existence ('is\*' and 'is\*\*'), and Aristotle's consequent inability to assert 'goat-stags do not exist' and 'goats exist'. I agree with Grice's attacks, but think that my view meets them. Also I find his interpretation of 1017a27-30 weak.

<sup>23</sup> I agree with Christopher Kirwan's critique of Ross (*Aristotle's Metaphysics: Books Γ, Δ, and E*, First Edition, p. 141) on how to understand 'be *per se*' and to with his claim that 'be *per se*' be understood as 'exist'. But I deny his claim, p. 142, that 'be *per se*' must then be homonymous. Rather I hold that his two options, that Aristotle is classifying "1) different ways of understanding propositions of the form 'x is F' or 2) different senses of the word 'exist'" may be combined.

<sup>24</sup> Christopher Kirwan, *Aristotle's Metaphysics: Books, Γ, Δ, E*, First Edition, p. 79: "he is not making the absurd claim that whenever two existential statements are asserted on differ-

tic. Moreover, as W. Thorp has noted, this doctrine would have the result “that predication *per se* is not then divisible into ten sorts only, but into fifty five,” due to having subjects and predicates in different categories.<sup>25</sup>

### *An Aporetic Interlude*

Nevertheless, attractive though it may seem for its simplicity, this interpretation of being *per se* has its difficulties, in itself and in its compatibility with other texts. For, after all, many think that Aristotle changes his mind about many topics concerning being.<sup>26</sup> So he may not have a single theory of predication anyway. Still, I find it a charitable, worthy hypothesis to try to defend a unitarian interpretation unless compelled to abandon it. Although I cannot be encyclopedic here, I shall reconsider some prominent objections to my unitarian interpretation of predication.

1) Aristotle says that “be *per se*” may “signify” predicates in any of the ten categories, even though predicates in every category but substance will produce accidental predications when used of a substantial subject (and Aristotle uses such examples at 1017a27-30). But how can Aristotle say that ‘be *per se*’ can signify predicates in any category? For Aristotle has just said that accidents have being only *per accidens*, through being accidents of substances, which are *per se*. But predicates in the other category signify, for Aristotle, accidents of substance. So how can they signify what is *per se*?

I have answered this question by distinguishing essential being (or predication) from being *per se*. Although predicates signifying accidents cannot be used in essential predication, in a statement of *per se* being (or ‘is’), they can still signify beings *per se*.<sup>27</sup>

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ent grounds they must be understood in different senses. The kind of ground he has in mind is that which gives an account or explanation of what it is for something to exist.”

<sup>25</sup> W. Thorp, “Aristotle’s Use of Categories,” p. 242. So *Metaphysics* 1042b25-6 concerns the different ways in which ‘be’ may be further determined and not different meanings of ‘be’.

<sup>26</sup> If dating be crucial, as it is for anything but a unitarian view of Aristotle’s works, note that *Metaphysics* V, the lexicon, is generally acknowledged to be an early work. Thus the bulk of Aristotle’s logical and scientific work do not precede it. Hence the views that it presents, if they agree with those of *Metaphysics* VII, generally thought to be a late work, would likely also agree with Aristotle’s intervening logical and scientific works.

<sup>27</sup> Ernst Tugendhat, *TI KATA TINOS*, p. 50, discusses in what sense Aristotle allows for a science of accidents, and, n. 14, gives a list of texts. That is, a science of accidents that are *per se* and not of being *per accidens*. Cf. 1025a32. So too we may understand the phrase, ‘*per se* accident’. Tugendhat, p. 56, thinks this a later doctrine of Aristotle.

However, my distinction might be challenged thus: Consider the beginning of *Metaphysics* VII.1 [1028a1-31], where Aristotle seeks to answer the question, ‘what is being?’. There he is pursuing “the science that considers being *qua* being and those things belonging to it *per se*.” [1003a21-2] Referring to the passage in *Metaphysics* V.7, he says that “being” (τὸ ὄν) is said in many ways, and then gives the same list of categories. He then proceeds to argue that, although those in all categories have being, substances have it pre-eminently.

Thus in *Metaphysics* VII.1 Aristotle identifies “being *qua* being with “being *per se*”. [So too *Metaph.* 1003a21-2; *An. Po.* 73b27] Objects in the accidental categories are said to be, *qua* being and *per se*, not strictly and primarily but only secondarily. How can such claims go together with the claim of *Metaphysics* V.7, that objects in all the categories have being *per se*?

These differences may be resolved in light of Aristotle’s general method. Aristotle typically begins from current opinion, of the experts if available: the *endoxa*. [*Top.* 199b21-3] Then he proceeds to establish his own view by critiquing it. His own view may end up differing from previous opinion.<sup>28</sup>

Thus Aristotle often moves from common (philosophical) usage to establishing his own technical usage during his discussion. Above I have already noted a similar shift within *Metaphysics* V itself. When Aristotle discusses ‘καθ’ ὅ’ and ‘καθ’ αὐτό’ in *Metaphysics* V.18, he ends up concentrating on ‘καθ’ αὐτό’ in his technical sense of ‘essential’, as in *Posterior Analytics* I.4.<sup>29</sup> But he starts with the current philosophical usage of these expressions.

Likewise, at *Metaphysics* VII.1 Aristotle is going beyond describing ordinary and philosophical Greek usage to establish his own position. When he says of the accidental categories that “none of them is naturally *per se* nor can be separated from substance” [1028a22-4], he is qualifying and reformulating his original observation that all the categories have said to have being *per se*. Now he is no longer describing the uses of ‘being’,

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<sup>28</sup> As he does when concluding in *Nicomachean Ethics* I that the good life consists in study—a case of what T. H. Irwin, *Aristotle’s First Principles*, pp. 350-8, calls strong dialectic,

<sup>29</sup> W. Thorp, “Aristotle’s Use of Categories,” p. 244, dismisses reading being *per se* existentially because he takes ‘*per se*’ in the sense of *Metaphysics* V.18. As he notes, the existential reading “is alluring because it is satisfactory to divide up existential being into categorical senses, whereas it is odd to so divide essential predication.” But he goes with Aristotle’s explanation of ‘*per se*’ in V.18. He says, “Either Aristotle is grossly inconsistent and misleading in his use of technical words in Delta, or this [sc. Thorp’s] reading of Δ.7 is wrong.” I go for the first option: Aristotle is not inconsistent, but only misleading, though.

his *endoxa*, but arguing for his own view: objects in accidental categories do not have being *per se*, strictly and primarily. So too the meanings of ‘καθ’ αὐτό’ listed in *Metaphysics* V.18 concern more Aristotle’s usage than that of his predecessors. In contrast, in *Metaphysics* V.7 Aristotle simply describes the uses and stops. For, as we have seen, the use of ‘καθ’ αὐτό’ there agrees with its use in Plato’s *Sophist*.<sup>30</sup>

What Aristotle himself says in VII.1 makes this clear. He does not deny there that objects in accidental categories have being *per se*.<sup>31</sup> Rather, he says, they have that being secondarily, on account of their ontological dependence upon objects in the category of substance. On account of that, someone “might object” to accidents signifying being [*per se*] at all. [1028a20-2] Still, Aristotle never denies that they do signify being *per se*, but insists that they do so only secondarily.<sup>32</sup> This result follows even from Plato’s original meaning of ‘being *per se*’, as opposed to ‘being *πρός ἄλλα*’: for, given the ontological dependence of objects in accidental categories on substance, they are “relational” (*πρός ἄλλα*) and not strictly beings *per se*.

2) The examples that Aristotle gives for being *per se*, like ‘a man is walking’, could equally well have been used by him as examples of being *per accidens*, like ‘a man is musical’. As I have noted, the senses of ‘be’ overlap. How does my interpretation of being *per se* allow for this?

Above I have said how Aristotle determines whether something has being *per accidens*. In all cases of beings *per accidens*, the thing is signified by a term in an accidental affirmative predication. Thus, when ‘S is P’ is an accidental predication, Aristotle first looks at ‘S’ and ‘P’. If either (or both) signify an accident, then it (or both) signifies a being *per accidens*, and the ‘is’ in the original predication is *per accidens*: for the accident “is” *per accidens* in virtue of the “being” (*per se*) of its substance. To be sure, the accident may be *per se* as well, but, if so, not in virtue of its belonging to its subject.<sup>33</sup>

<sup>30</sup> Aristotle holds not that philosophy must preserve the *endoxa* but only must explain them. Cf. Martha Nussbaum, “Saving Aristotle’s Appearances,” p. 277; G. E. L. Owen, “Tithenai ta phainomena,” p. 243: “In the same fashion the *endoxa* must pass the appropriate scrutiny, but in so doing they become pure data.”

<sup>31</sup> Günther Patzig, “Logical Aspects of Some Arguments in Aristotle’s *Metaphysics*,” p. 40, agrees that *Metaphysics* VII.1 has sense of ‘is’ has the various senses of V.7

<sup>32</sup> Edward Halper, *One and Many in Aristotle’s Metaphysics*, p. 21, holds that Z.1 asserts only that *ousia* has primacy among *per se* beings; to establish that it has primacy over all beings would require considering those other types of beings.

<sup>33</sup> Vincenza Celluprica, “Logica e semantica nella teoria aristotelica della predicazione,” p. 175, suggests that when, e.g., ‘white’ signifies the quality whiteness, it signifies a being *per se*, and that, when it signifies the paronym, (the thing) having whiteness, it signifies a being *per accidens*. I agree so long as the paronym is taken non-substantively. See Chapter Six.

Moreover, it is clear that Aristotle uses examples of accidental predication and allows the predicate to be an accidental attribute of the subject when he discusses being *per se*. 'A man is walking' would be an instance of accidental predication as Aristotle has described it, like 'a man is musical'. So then 'a man is musical' should also count as an instance of being *per se*. Likewise, when Aristotle investigates being *qua* being, he has no hesitation in calling accidental attributes 'beings'.

Therefore, as described by Aristotle, being *per accidens* and being *per se* overlap and have common cases. Still, 'a man is rational' will not be a case of being *per accidens* but is one of being *per se*. For, according to Aristotle, for something to have being *per accidens*, it must be accidental to the subject.<sup>34</sup> Again, 'not-white is' is a case of being *per accidens* but not being *per se*. So the distinctions overlap but are not coextensive. This feature holds frequently for the distinctions that Aristotle makes in *Metaphysics* V, like 'one in number' and 'one in species'.<sup>35</sup> In chapter 7 itself, surely the alethic and problematic senses can overlap with each other, and with the *per accidens* and the *per se* senses.

For the sake of explaining what Aristotle intends by contrasting 'being *per se*' and 'being *per accidens*', let me anticipate some material to be discussed below. Aristotle is worried about inferences like 'the goat-stag is an object of illusion; therefore, the goat-stag is' and 'Homer is a poet; therefore, Homer is'. The conclusions of such inferences have being *per accidens*, like 'the not-white is'. No categorical predicate can be affirmed truly, in a statement of being *per se*, of goat-stag nor of Homer, now that he is dead. Homer and goat-stag have being accidentally. In contrast, real things have being *per se*. Aristotle makes the contrast hard to grasp because he often uses examples with real subjects for being *per accidens*.<sup>36</sup>

<sup>34</sup> Or must it? Cf. 'Socrates is a not-dog; not-dog is'; 'Socrates is not Fido; therefore not-Fido is'. It is not clear that the predications are essential, for 'not dog' and 'not Fido' are not parts of the definition of the essence of Socrates. But are they *propria*? It seems not, especially as 'not-S' includes both what exists and what does not exist. See below, Chapter Seven.

<sup>35</sup> Ammonius, in *De Int.* 207,28-208,3; 209,2-7, ties predication *per se* to the subject's and predicate's (or: predicates') signifying a single thing, and predication *per accidens* to their not doing so. Recall Zeno's stricture.

<sup>36</sup> Christopher Kirwan, *Aristotle's Metaphysics: Books Γ, Δ, E*, First Edition, p. 81, in discussing 'the not-being is not-being' [1003b10], claims that "Aristotle asserts that the existence of denials explains why we can say that what is not is a thing that is not. Here lurks the false assumption that in a sentence of the form 'x is  $\phi$ ' the function of the copulative 'is' must always be to assert the existence of something." However, on my interpretation, the 'is' there is an 'is' *per accidens*, whose being depends on the existence of something being *per se*.



Being *per se* thus is real existence; being *per accidens* is an existence other than and derivative from real existence.<sup>37</sup> Its being depends upon being talked about in a statement of being *per se*. In light of Aristotle's using 'the not-white is' as an example of being *per accidens*, we may connect being *per accidens* with the discussion of not-being in the *Sophist*. Since we may think and talk about what is not, we may call being *per accidens* being *in intellectu*, although this approach appears to be more conceptualist than Aristotle generally allows.<sup>38</sup> Still, later Aristotelians do speak of existence *in re* and existence *in intellectu*, where this distinction has that of being *per se* and being *per accidens* as an ancestor. Further, Aristotle himself seems to describe being as truth like being *per accidens*, in that it has being only in thought, as I shall discuss below.

So some things will be *per se* and not *per accidens*, and conversely. For Aristotle, substances alone have being *per se* and not *per accidens*; accidents have both sorts of being; anything else that can be talked about, like "the non-existent" or "the not-white", has only being *per accidens*. Indeed, this unique characteristic of substances may provide the bridge between the old, Platonist meaning of '*per se*', and Aristotle's new one, in *Metaphysics* V.18

3) After saying that 'being *per se*' is said in as many ways as the figures of predication, or categories, are said, Aristotle says that since predicates may signify substance, quality, quantity, etc., "be (*εἶναι*) signifies the same for each of these." [1017a27] Here "these" probably refers to the categories of predicates just distinguished. But how can being signify the same for each of them, when Aristotle has just claimed that being signifies in as many ways as there are categories? [1017a23-4] Aristotle seems to be saying that 'be *per se*' has ten meanings 'be as a substance', 'be as a quantity', etc. But then why does he not say that 'be *per se*' is ambiguous instead of taking it as one meaning of 'be'?

Aristotle takes 'being *per se*' to be determined by predicates and the figures of predication. Consider again examples of such predicates in context: 'Socrates is an animal', 'Socrates is obnoxious', 'Socrates walks'. These predicates, Aristotle says, determine different categories of being *per se*. To be *per se* is to be in different ways: as a substance, as a quality, as an action. Being (*per se*) is said in as many ways as they are categories.

A statement of being is of the form, 'S is'. Such statements look peculiar, but Aristotle and his philosophical predecessors admit them: 'the not-

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<sup>37</sup> Jaakko Hintikka, "The Varieties of Being in Aristotle," p. 88, hints at a similar interpretation of Aristotle.

<sup>38</sup> Cf. Franz Brentano, *Von der mannigfachen Bedeutung des Seienden nach Aristoteles*, p. 6 [trans. R. George, p. 3].

white is' [1017a18]. Such a statement can be qualified further, by predicates. In the *Categories* Aristotle has claimed that there are ten ultimate categories, also known as figures or types of predicates. Thus to say that S is can be qualified further by a predicate from one of the ten categories. The predicate specifies the being further. Something can *be* in many ways, as a substance, as a quantity, as a quality.<sup>39</sup>

Aristotle makes all this clear in *Metaphysics* VI.2 where he repeats the list of meanings of 'being' ('τὸ ὄν' here) that he has distinguished in V.7. He begins, "But since 'being' said without qualification (ἀπλῶς) is said in many ways..." [1026a33-4] By this he means to talk of 'being' simply, without being qualified further.<sup>40</sup> He there says, of 'S is', that it may be said in the accidental sense of being *per accidens* as well as in the alethic mode, where it means 'it is true'. He then says, "besides these", there are the figures of predication, and then lists the categories. [1026a35-b2] This then is the sense of being *per se* distinguished in V.7.<sup>41</sup> Aristotle does not include it among the senses of being said without qualification, because here 'being' has a qualification, namely a further predicate. Likewise, he then mentions, "again besides these", the problematic mode, where 'being' may be taken to indicate an actual or a potential state of affairs. [1026b1-2] In that case as well the basic assertion of being simply, 'S is', is further qualified by a predicate.

We can then understand Aristotle's remarks, on the one hand that being signifies in as many ways as there are categories, and, on the other, that being signifies the same for each of them. The assertion of being remains constant regardless of which categories the terms indicate. Still, this bare assertion of being is further specified or qualified by predicates in the ten classes of the categories.<sup>42</sup>

Indeed, to say that being *per se* is said in as many ways as there are categories ensures that a statement of being *per se* has an existence condition for its subject. For Aristotle implies that 'being *per se*' can be said only in the ways of the ten categories. This entails that a statement of existence, 'S is (*per se*)', will be true only if, for some predicate P out of one of

<sup>39</sup> 'Being' "...takes on a different sense, a characteristic colouring, corresponding to the category which determines the connection of subject and predicate in a given true proposition." Günther Patzig, "Logical Aspects of Some Arguments in Aristotle's *Metaphysics*," p. 41. W. D. Ross, *Aristotle's Metaphysics*, Vol. I, pp. 306-8.

<sup>40</sup> [Ps-] Alexander, in *Metaph.* 448,2-14.

<sup>41</sup> W. D. Ross, *Aristotle's Metaphysics*, Vol. I, p. 358.

<sup>42</sup> John Cook Wilson, *Statement and Inference*, Vol. 1, p. 181, asserts similarly that 'to be' should not stand by itself, but needs to be completed as being so and so.

the ten categories, 'S is P'.<sup>43</sup> So, e.g., 'not-being is (*per se*)' is false, since it cannot be specified further by a predicate from a category.

So 1017a22-3 should be understood as "'be *per se*' is said in just as many ways as the figures of predication signify." Aristotle is not claiming that the predicates have being *per se* in ten different ways corresponding to the ten categories.<sup>44</sup> Rather, a statement of being *per se*, i.e., a statement of the form 'S is', may be qualified and further specified by predicates from any of the ten categories.<sup>45</sup> 'Being *per se*' here does not mean 'being essentially' but rather 'being without needing any further (individual) object for existing'. Aristotle is not defining '*per se*' ('καθ' αὐτό') in his sense here, but distinguishing different meanings of 'be'.<sup>46</sup> I have noted that Aristotle says completely different things when he discusses 'καθ' αὐτό' in *Metaphysics* V.18.

4) Finally, why does Aristotle remark that pairs like 'a man walks'—'a man is walking'; 'a man heals'—'a man is healing', etc., differ in no way [1017a27-30] support the claim that being signifies the same, regardless of which categorial predicate is used? This remark looks grammatical and intensional.<sup>47</sup> Why does he make it here?

Given that we interpret Aristotle to be presenting the aspect theory in his discussion of being *per se*, this remark does have a point. On this interpretation, Aristotle here is stating that the basic structure of a statement is: S is as a P, where the basic assertion is: 'S is', and then the predicate further specifies the being of S. Likewise, as I shall discuss below, Aristotle says that the basic statement forms are: S is — S is not. [*Int.* 19b15-6] An assertion, 'S is', taken as a predication of 'is' *per se*, is true only if it can be

<sup>43</sup> Michael Frede, *Prädikation und Existenzaussage*, p. 29, asserts the same for Plato.

<sup>44</sup> Pace Joan Kung, "Aristotle on Theses, Suches, and the Third Man Argument," pp. 221-2, Aristotle does not offer any logical rules for ten distinct logical types of *copulae*. Rather, 'is' has a basic but incomplete meaning that needs to be specified further. Those further determinations fall into the ten categories. Cf. *Soph. El.* 178b36-179a10 and Michael Frede and Günther Patzig, *Aristoteles's Metaphysik Z*, Vol. 2, p. 47: "Wenn davon gesprochen wird, dass diese Kategorien das sind, 'wodurch das Seiende abestimmt wird', so ist nicht daran zu denken, dass irgendein Gegenstand durch seine Widerfahrnisse bestimmt wird, sondern dass der allgemeine Ausdruck 'Seiendes' durch die Differenzierung in die Kategorien erst die Bestimmtheit erhalten kann, die uns erfahrer lässt, was es den jeweils ist, von dem als einem Seiender die Rede ist."

<sup>45</sup> Cf. Michael Frede, "Categories in Aristotle," pp. 43-4.

<sup>46</sup> Christopher Kirwan, *Aristotle's Metaphysics: Books Γ, Δ, Ε*, First Edition, pp. 140-2, takes Aristotle to be giving various senses of 'exists'.

<sup>47</sup> Except that Aristotle means it to have logical significance. See Moses Matthen, "Greek Ontology and the 'is' of Truth," p. 122. R. Allan Cobb, "The Present Progressive Periphrasis and the Metaphysics of Aristotle," p. 80, says that this is the first instance of this form for philosophical purposes. Also cf. John Cook Wilson, *Statement and Inference*, Vol. 1, p. 29.

specified further by predicates belonging to one of the ten categories. In this light, Aristotle says that not-being is false. [1026a35] For ‘not being is’ cannot be so specified further.

Now Aristotle’s insistence that ‘is’ be present in a statement becomes understandable. He is worried that in a statement like ‘Socrates walks’ the ‘is’ is concealed, and so this statement cannot be analyzed as ‘Socrates is, as walking’. Then the statement would not be making an assertion of being *per se*, and the aspect theory would not apply.<sup>48</sup> By providing the equivalence to ‘Socrates is walking’ Aristotle makes the aspect theory applicable.<sup>49</sup>

Thus Aristotle seems to think that a statement with ‘is’ in it makes a statement about how its predicate has being *per se*. Otherwise, why would he insist so much upon the implicit presence of ‘is’ in a statement like ‘Socrates walks’? He wants that statement to be read as ‘Socrates is walking’, and so as making an implicit assertion about being *per se*.

That Aristotle takes a predicate to specify a respect in which the subject is is suggested also by his saying about predicates in accidental categories, “the others are called beings through being quantities or qualities or passions or something else of what is really.” [1028a18-20] So walking *is* through being an action of a substance; obnoxious *is* through being a quality of a substance. This phrasing, “is through”, also suggests an aspect theory of predication.

So it is clear why Aristotle would find the equivalence of ‘S is P’ and ‘S P’s’ relevant to his discussion of ‘being *per se*’. For he needs an explicit statement of ‘is’ to have being *per se* at all, unlike Lycophron, who needs to eliminate it.<sup>50</sup> Thus he needs to show that other statements that do not contain ‘is’ explicitly can be reduced to statements that do. In this way all statements concerning reality will have an explicit statement of being, which can be qualified further by predicates from one of the ten categories. Despite the diversity of qualifications, still “‘being’ signifies the same for each of these,” that is, the assertion of being, or existence, remains constant regardless of the category of the qualification.

So I have argued that Aristotle presents, albeit obscurely, the aspect theory of predication in his discussion of being *per se*. That theory does not apply to other senses of ‘is’: for then we would have to admit that something, like a goat-stag, exists from asserting that it is an illusion or is possible. In distinguishing the various senses of ‘is’, Aristotle is marking out the

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<sup>48</sup> L. A. Kosman, “Predicating the Good,” p. 173.

<sup>49</sup> Aristotle does not seem to be distinguishing between actualities and movements here as he does at *Metaphysics* 1048b18-35, but means this schema to be applied to all verbs.

<sup>50</sup> See Chapter Two, n. 58.

sense of 'is' with which he is concerned in his logic and philosophy. It is this sense of 'is', of being *per se*, that has existential import.<sup>51</sup>

### *The Alethic Sense*

Next Aristotle discusses an alethic sense of 'be', where he says that 'ἔστιν' means 'it is true (that)'. There is some doubt whether or not 'ἔστιν' in fact had this meaning in colloquial ancient Greek. However, as I have suggested above, we need not be altogether confined by the limits of ordinary usage when evaluating philosophical writing.

In any case, Aristotle, like Parmenides too, so many have claimed, endorses this usage; he is Greek; therefore it is Greek usage! He gives an instance of accidental predication, which could also count as one of predication of being *per accidens*, 'Socrates is musical', and an instance of essential predication, 'the diagonal of the square is not commensurate...' In all cases, the schema is the same: in the alethic sense, 'S is P' means 'it is true (to say) that S is P'; 'S is not P' means 'it is not true, or false, (to say) that S is P'. Here in the analysis 'S is P' is to be taken as indicating the predication relation, that P is attributed to S.

Given that being as truth indicates only the relation of subject to predicate, any affirmation of being *per accidens* or *per se*, as Aristotle has described them will also make an assertion of truth.<sup>52</sup> Likewise, any denial will make an assertion of falsity. The alethic sense of being thus overlaps with the distinctions of *per accidens* and *per se* being, but makes a division in respect of affirmation and denial.

Aristotle implies that the alethic sense applies to all grammatical forms of 'being' that he commonly uses. For he says that 'be' ('εἶναι') and 'is' ('ἔστιν') have this alethic sense [1017a31], and elsewhere that the substantive 'being' ('τὸ ὄν') has it. [1026a33-5]<sup>53</sup>

Strictly the true and the false are not in objects but in thought. [1027b25-7] Aristotle says

<sup>51</sup> Michael Wedin, "Aristotle on the Existential Import of Singular Sentences," p. 180, agrees that Aristotle holds that 'S is P' has the structure 'S exists and that S is P'. My results need not conflict with him, when he says, p. 193, that Aristotle does not require existential import for the grammatical subject of a singular statement. I agree in general, but not for affirmative statements of being *per se*. My results do conflict with W. Thorp, "Aristotle's Use of Categories," who holds, pp. 254-5, that 'be' has no existential sense in *Metaphysics* V.7, although it does so elsewhere.

<sup>52</sup> Cf. Philoponus, in *An. Pr.* 380,4-12, who argues for the equivalence of 'is' and 'true'.

<sup>53</sup> Gabriel Nuchelmans, *Theories of the Proposition*, p. 29, calls this the "assertive use" of 'is'. Cf. *On Interpretation* 21b31.

Since the combination and division are in thought but not in objects, and what is in this way is different than those [that are] strictly...being as accident and being as truth must be eliminated. [1027b29-34]

Aristotle identifies another sort of being here: being in thought. This he contrasts with the being of objects. This distinction looks a lot like the later distinction of existence *in intellectu* and existence *in re*. This distinction being in reality and being in thought has great importance for understanding Aristotle's views on the inference from 'S is P' to 'S is', as we shall see in Chapter Eight.

Being as truth has being in thought, because it deals with the combination or division of affects of the mind, or concepts, in statements in the mental language. Plato in the *Sophist* has the same doctrine for the truth and falsity of statements. For Aristotle, being *in intellectu* depends upon being *in re*, as our knowledge comes from the perception of objects. Accordingly, Aristotle dismisses being as truth as a candidate for being *qua* being: it, like being *per accidens* has being only derivatively, from objects that have being *per se*. In particular, truth, when taken generally to cover both being *per se* and being *per accidens*, makes no guarantee of real existence.

When describing being as truth as having being in thought, Aristotle does not exactly recognize existence *in intellectu* along with the existence of objects and attributes *in re*. To be sure, he also speaks in *On Interpretation* 1 of the affects, caused by real objects, in the mind, and in *On the Soul* of the thoughts, memories, and phantasms in the mind. Later Aristotelians like Ammonius certainly recognize existence *in intellectu*. If we recognize this in Aristotle, we could say that all sentences, whether of being *per se* or *per accidens*, assert existence *in intellectu*, while only those of being *per se* assert (truly) existence *in re*. However, I am not sure that Aristotle does this. He dismisses what is in the mind only as derivative, having no importance unless it reflects what exists *in re*. Having two sorts of existence seems more like Plato's doctrine of the divided line. Moreover, recognizing both might call for more complexity in state logical rules that Aristotle seems to give.

In any case, elsewhere Aristotle considers being as truth in a more positive and a more restrictive light. [1051b1ff.]<sup>54</sup> He considers the objects and their attributes themselves as true or false. The being of the objects and their attributes as "true" makes the statements about them true. A false ob-

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<sup>54</sup> Especially if we keep the phrase excised by Ross. Ernst Tugendhat, *TI KATA TINOS*, pp. 56-7; nn. 21-2 relates the notion of predication as simple presence to a general concept of truth.

ject is one that is not as it appears, e.g., a counterfeit or an illusion, while a true object is as it appears. Likewise, in his discussion of the term ‘false’ later in his lexicon, Aristotle again ties together being and truth, and not-being and falsity. [1024b21-6] He is willing to allow senses according to which objects as well as assertions can be true or false. Accordingly, assertions may be true or false according to whether they are statements of beings, i.e., of what is, or of not-beings, i.e., of what is not. [1024b26-8] The being of objects grounds truth; not-being grounds falsity. [1051b6-9] Conversely, affirmations assert being and what is; denials not-being and what is not. [*Int.* 18b3] This sense of being as truth seems more robust and more restrictive than merely the one indicating being in thought.<sup>55</sup>

On the aspect theory of predication, we may see how Aristotle may have been inclined to recognize the alethic sense both generally and more restrictively. ‘S is P’ is to be taken as ‘S is (existent) as (a) P’, which may be resolved into two claims: that S is (existent) and that S is a P. So the statement asserts the present existence of S’s being there as a P, i.e., the presence of a truthmaker for the predication of ‘P’ of ‘S’. The presence of that truthmaker makes it “true to say” that S is P. [1051b6-9] In this way, an existent object generates truth, and a non-existent object falsity. The object itself might be called true, as its presence makes the assertion of that statement at that time true. (Descartes, following medieval usage, also speaks this way in *Meditation 4*.) As the objects that ground the truth of all assertions are ultimately beings *per se*, Aristotle could come to equate being and truth in a more restrictive sense.

Because combinations of objects and their attributes ground the truth of their statements, the statements themselves assert the existence of these combinations. Here Aristotle seems to be taking the subject and predicate to signify a complex that may or may not be the case: ‘S is P’ is to be read as ‘S-P is the case’. [*An. Pr.* 52a32-4] The statement is true if S-P, the truthmaker, exists. In the previous chapter, when discussing Parmenides and Plato, I have indicated how this way of reading a statement is compatible with the aspect theory: ‘there exists an S-P’.

### *The Problematic Sense*

Again Aristotle recognizes a problematic sense, a usage of ‘is’, where ‘ἔστιν’ means ‘it is possible’. This meaning for ‘be’ sometimes occurs also in ordinary Greek, where the usual grammatical construction is ‘ἔστιν’ plus the infinitive. However, Aristotle wants this problematic sense to hold for

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<sup>55</sup> Aquinas perhaps starts from here as I shall mention in Chapter Nine.

other grammatical constructions, like the simple statement of form ‘S ἐστι P’. It is not clear whether Aristotle would even want his problematic sense to be parsed by ‘ἐστι’ plus the dative. Aristotle does not generally use that construction when he speaks of possibility and potentiality.

Aristotle claims that in simple statements ‘is’ may mean both ‘is actually’ and ‘is able to’. So, he says, ‘he is seeing’ may mean ‘he is actually seeing’ or ‘he is able to see’. For we take such claims to be true, when the person is actually looking at something but also even when the person is not actually seeing anything but has the ability to see at will.

To call such a statement concerning an actual ability that is not presently being actually used a problematic statement or a statement of possibility may be misleading. At any rate, Aristotle does not appear to consider these statements statements of possibility. To be sure, they are statements of potentiality, but in the sense of actual potencies or powers. Indeed, elsewhere, in *On the Soul*, Aristotle himself prefers to call such actual potencies “actualities” (ἐντελέχειαι), and says that there are two types of actualities: the first type of those that he calls ‘potentialities’ (δυνάμεις) in chapter 7; the second those that he calls ‘actualities’ (ἐντελέχειαι) there. [*De An* 412a21-6; *Metaph.* 1046b29-33] As he uses the same example, ‘he is thinking’, in both passages, likely Aristotle in *On the Soul* is refining the philosophical usage that he has inherited and describes in *Metaphysics* V.7. A statement of ‘is’ makes a statement of actual being, and not of merely possible being. Consistent with this usage, Aristotle, when discussing ‘potentiality’ (δυνάμις) in *Metaphysics* V.12, implies that only actually existing substances can have potentialities. In fact, in his own philosophizing, he goes so far as to suggest that every potentiality must exist at some time. [1047b3-6] Thus Alexander says:

For ‘able’ is not predicated of any beings whatever, but only in the case of what already is, and is able, proximately, to change into that which is said to be able to receive it: for someone rightly says that what is already a stone is Hermes in potency, whereas someone will not say that the earth and water, from which the stone comes to be, is Hermes in potency.<sup>56</sup>

Only things that presently exist in reality can have actual or potential being. E.g., ‘Socrates is walking’ and ‘Socrates is a speaker of Greek’ are true only if Socrates presently exists. But the former statement asserts an actual reality of Socrates: Socrates is actually walking now. In contrast, ‘Socrates is a speaker of Greek’ asserts that Socrates presently exists and presently

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<sup>56</sup> Alexander, in *Metaph.* 332,28-32; cf. 332,12-5.



has the ability to speak Greek: he need not be speaking Greek now, but could at any time, in normal circumstances, without any further training.<sup>57</sup>

Aristotle makes these claims not about 'is' ('ἐστίν') but about 'be' ('εἶναι') and about 'being' ('τὸ ὄν'). Here is further evidence that Aristotle does not care too much about the grammatical issues of the linguistic uses of 'be' so much as what objects or realities an occurrence of 'be' may signify or make claims about.

A statement of being may be taken actually or potentially whether the predication be essential or accidental. Surely both the actual and potential readings apply to cases of accidental predication, like 'Socrates is brave'. The case of essential predication presents more difficulty. For, at least in some cases, it seems that the subject must have the essential attribute always actually. E.g., in 'Socrates is an animal', the claim is made that Socrates is actually an animal, and must be so always, as long as Socrates is alive. But consider other cases: 'Socrates is breathing', 'Socrates is thinking'. I do not know for certain whether or not Aristotle would consider these statements to make essential predications. But why not, as breathing seems to be necessary for being an animal, and thinking for being rational? If so, then Aristotle would recognize both an actual and a potential reading also for statements with essential predications.<sup>58</sup> Indeed, the variety of examples that he gives, 'he sees' and 'he knows' and 'it rests', on the one hand, and 'Hermes is in the stone' and 'half of the line is in the line' and 'that (unripe stuff) is corn', on the other, suggests that Aristotle is giving examples of both essential and accidental predications here. For not only the content of the predicates but the 'is in' construction support such a reading.<sup>59</sup>

The aspect theory readily accounts for why Aristotle would be inclined to recognize an actual and a potential reading for 'be'. According to it, an assertion of being, 'S is', is read as: 'S is existent as...', where the existence may be specified further by a categorical term. As 'existence' on the aspect theory means 'real presence', 'S is existent as...' might be paraphrased further as 'S is there present to be...' which may be read as 'S is available for being...' We can thus see how 'ἐστίν' might be taken to assert a mere possibility and not an actual state of affairs. However, note that such a possibility or potency is tied to the actual existence of S. Such an expression of possibility should be used (by Aristotle at least) only of a subject that

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<sup>57</sup> In Aristotle's terms: "if nothing prevents." Cf. *Parts of Animals* 645a25.

<sup>58</sup> Some later Aristotelians did this explicitly. See Allan Bäck, "Avicenna's Conception of the Modalities."

<sup>59</sup> Cf. too the compositional predication as in 'this wood is a casket', which Aristotle identifies with problematic predication, as I discuss below.

actually exists, and not of any possible being that exists in some merely possible world. And indeed Aristotle is concerned with the potentialities of an actually existing thing, not the potentialities of a possibly existing thing. He shows little interest in possible beings in possible worlds. Aristotle thus says that an 'is' statement may concern the actualities or the potentialities of an existing thing. But his default value, for 'is' taken strictly, is the absolute sense of the actuality.<sup>60</sup>

### *The Predicates of Matter*

I have then given the analysis of being in *Metaphysics* V.7 great importance. However, many scholars have not found this passage in *Metaphysics* V.7 especially profound or even noteworthy. Rather, they contend, Aristotle presents his mature theory of predication in such places as *Metaphysics* VII.3.<sup>61</sup> So let me conclude by showing how that chapter fits in with my interpretation of being *per se*.<sup>62</sup>

In *Metaphysics* VII.3, Aristotle is considering whether substance, what has being *per se* primarily, is, primarily, matter. There he discusses "ultimate matter", what is left when all determinate attributes, both accidental and essential, are stripped away. Aristotle wonders whether this ultimate matter is that of which all else is predicated. In this discussion, Aristotle characterizes matter thus:

I mean by matter what is *per se* said to be neither some[thing] nor a *quantum* nor anything else by which being is defined (*ὑποστασις*). For there is something of which each of these is predicated, from which each of the other categories is different [in] being (for the others are predicated of it, and it of matter), so that what is ultimate *per se* is neither some thing nor a *quantum* nor anything else. Nor are denials [predicated of it], for they too belong [to it] *per accidens*. [1029a20-6]

<sup>60</sup> Mohan Matthen, "Aristotle's Semantics," pp. 39-40. Cf. pp. 25-9; 34.

<sup>61</sup> Joan Kung, "Can Substance be Predicated of Matter?", p. 148. Also, Dan Graham, *Aristotle's Two Systems*, p. 65, claims that *Metaphysics* VII.3 contains Aristotle's most direct statement on predication, at least that of the hylomorphic system S<sub>2</sub>. However, Franz Brentano, *Von der mannigfachen Bedeutung des Seienden nach Aristoteles*, p. 7 [trans. R. George, p. 4], thinks that V.7 gives the most comprehensive classification to which those others, e.g., in *Metaph.* VI.2 and IX.10, refer. So too Ernst Tugendhat, *ΠΙ ΚΑΤΑ ΤΙΝΟΣ*, p. 44, stresses the importance of V.7 and its connection to Z.1

<sup>62</sup> Mary Louise Gill, *Aristotle on Substance*, pp. 20-3, has a useful summary of different interpretations of Z.3.

Aristotle describes this ultimate material as what purports to be an ultimate subject, of which all else is predicated.<sup>63</sup> Since Aristotle has also characterized primary substance thus, in *Categories* 2 and 5, we can see how he would have to take seriously the claim that substance primarily is this ultimate matter.

This “ultimate matter” has been described traditionally as prime matter. However, some deny that Aristotle recognizes prime matter, but rather recognizes only more or less proximate matter.<sup>64</sup> I shall assume that Aristotle holds to a prime matter (at least as an ideal limit), as ‘ultimate’ suggests. Still, either reading will not affect my point here.<sup>65</sup>

Aristotle has said that the others are predicated of substance, and it of matter. Presumably, he is thinking of a sequence of statements like: ‘Socrates is 140 pounds’, ‘Socrates is grammatical’; ‘Socrates is an animal’; ‘this is Socrates’; where ‘this’ refers to the matter, and ‘Socrates’ to the substance.<sup>66</sup> When we say ‘this is Socrates’ and ‘that is (a) dog’, we seem to predicate the individual substance and the species of some more basic subject, an ultimate substratum: matter.<sup>67</sup>

Aristotle ends up, it seems, rejecting the view that substance is prime matter. [1029a26-30]<sup>68</sup> He speaks of those who hold this view, and says

<sup>63</sup> I have translated ‘τὸ ἔσχατον καθ’ αὐτό’ [1029a24] as ‘what is ultimate *per se*’ to capture the ambiguity of the phrasing, to be discussed below. Perhaps ‘ὑποκείμενον’ should be understood, but then in the sense of being a subject for predication. Cf. Michael Frede, “Substance in Aristotle’s *Metaphysics*,” p. 74.

<sup>64</sup> See S. Marc Cohen, “Aristotle’s Doctrine of the Material Substrate,” pp. 171-2 for a review of the texts and the secondary literature. See too Jacques Brunschwig, “La forme, prédicat de la matière?,” pp. 140-1.

<sup>65</sup> R. M. Dancy, “Aristotle’s Second Thoughts,” p. 39, n. 40. M. Frede and G. Patzig, *Aristoteles’ Metaphysik*, Vol. 2, p. 46, hold that the matter of Z.3 is not prime matter but is the ultimate substratum. However Thomas Olshevsky, “The Matter with Matter,” argues that the notion of prime matter as an ultimate subject was a later, Stoic conception.

<sup>66</sup> Suzanne Mansion, “La notion de matière en *Métaphysique* Z 10 et 11,” pp. 194-8; Jacques Brunschwig, “La forme, prédicat de la matière?,” pp. 141-3.

<sup>67</sup> H. Happ, *Hyle*, pp. 663-6, can’t figure out how a proposition could have prime matter as a subject. Jacques Brunschwig, “La forme, prédicat de la matière?,” pp. 145-6, says that the subjects here are names of things serving as more or less proximate matter. A new type of predication: S is determined by P. Cf. G. Patzig’s comments, p. 162.

<sup>68</sup> Pace Dan Graham, *Aristotle’s Two Systems*, p. 13, who says, “Yet the chapter [*Metaph.* VII.3 1029a1-26] seems to contain Aristotle’s most direct statement on predication.” Also pace Frank Lewis, *Substance and Predication in Aristotle*, pp. 152-4, who holds that the ultimate subject for predication, according to Aristotle in his late period, is prime matter. Likewise too Joan Kung, “Can Substance Be Predicated of Matter?” See her n. 1 for references to those who hold that Aristotle rejects prime matter as substance; also G. E. L. Owen, “Particular and General,” p. 288. Alan Code, “Aristotle: Essence and Accident,” pp. 434-6, claims that primary substances are predicated of matter and are no longer in the *Metaphysics* neither said of nor in a subject. Cf. Edward Halper, *One and Many in Aristotle’s Metaphysics*.

that it is impossible. For, being separable and being an individual (τόδε τι, a this-somewhat<sup>69</sup>) is characteristic of substance. But, as matter is neither a this nor an individual, matter cannot be substance.

Aristotle's characterization of ultimate matter also explains why he would reject its being substance. He says that "the ultimate [matter] *per se*" is neither a substance (assuming that "some[thing] ('τι')" signifies substance) nor a *quantum* nor any of the categories. This claim has two readings: if '*per se*' is read with 'is', then it claims that statements about the matter that make assertions of being *per se* have no further determinants in the categories. I find this reading less likely, as 'this is Socrates' etc. seem to make such determinations. The other, better reading is that prime matter, taken by itself, in abstraction from the composite substance, with no determinants, is neither substance nor *quantum* etc.<sup>70</sup> In either case, matter itself does not have being *per se*, for to have this, it must have those further determinants.

Aristotle continues by claiming that matter does not even have denials of being *per se*. Rather the denials made of it, that matter is neither substance nor *quantum* etc., are statements of being *per accidens*. As Aristotle claims that these "denials" will belong to matter *per accidens*, evidently he means to take the denials as metathetic affirmations, as in 'it is a not-substance'.<sup>71</sup> So too he has given 'the not-white is' as an example of being *per accidens*. For, taken as denials strictly, they would be denials of being *per se*: read 'this is not a substance' as 'it is not the case that this is (*per se*) a substance'. (As we shall see in Chapter Seven, Aristotle, like Plato before him, often construes denials as metathetic affirmations.) So, Aristotle says, all statements about prime matter assert only being *per accidens*. As Aristotle denies being *per accidens* scientific status, and accords it only a sophistical place, so too prime matter cannot be substance, or being *qua* being, primarily.

Yet Aristotle does appear to speak consistently of the form's (or composite substance's) being predicated of the matter. [1043a3-7; 1049a34-

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ics, p. 40; Malcolm Schofield, "Metaphysics Z.3: Some Suggestions," p. 93. M. Frede and G. Patzig, *Aristoteles' Metaphysik*, Vol. 2, p. 33.

<sup>69</sup> I.e., it is "both (a) singular and so signifiable by 'this' and (b) possessed of a universal nature, the name of which is an answer to the question" 'what is it?'; i.e., a primary substance. J. A. Smith, "Tode ti in Aristotle," p. 19. Cf. M. Frede and G. Patzig, *Aristoteles' Metaphysik*, Vol. 2, p. 15.

<sup>70</sup> '*Per se*' here would have the more general sense of 'it by itself', as it does in *On Interpretation*. [Ps-] Alexander, in *Metaph.* 465,4-5 [trans. W. Dooly, p. 32], takes it in this way, so as to mean the same as separable. Cf. 1029a28. '*Per se*' here does not indicate essential predication, as Joan Kung, "Can Substance Be Predicated of Matter?," p. 151, suggests.

<sup>71</sup> Cf. [ps.-] Alexander, in *Metaph.* 464,26-9.

b1]<sup>72</sup> Accordingly, those like Joan Kung claim that Z.3 does not refute the claim that matter is the ultimate subject and is substance in the strict sense, although the usual view is that it does.<sup>73</sup>

I support the majority view here: Aristotle does deny that, strictly speaking, the form is predicated of ultimate matter in *Metaphysics* VII.3. If we did accept Kung's reading of VII.3, probably we should have to accept Graham's conclusion of Aristotle's incoherence in his account of matter in the *Metaphysics*.

Perhaps, then, we might save the Aristotelian phenomena by allowing the form to be predicated of a less ultimate, more proximate matter. Indeed, I am inclined to side with R. M. Dancy and Michael Loux that when Aristotle asserts that a form is predicated of matter, he means proximate matter, or at least matter with some determinate properties, like the elements of earth, air, fire, water.<sup>74</sup> For when we say, e.g., 'this is a house, the 'this' that we indicate must be definite enough to be pointed at. But then the argument of VII.3 need not apply: for proximate matter does have attributes of substance, *quantum*, etc. So why then not allow the form (or composite substance) to be predicated of a non-ultimate matter with definite attributes?

However, I shall assert that in his protocol language Aristotle does not allow a predication of being *per se*, in the strict sense, of the form or of the composite substance of matter at all. For I shall take such a predication to make a type of either problematic or unnatural predication. But first let me show how the aspect theory, along with *Metaphysics* V.7, agrees with the doctrines of VII.3, and, indeed, even solves a puzzle about it.

If Aristotle did allow for the predication of the form of the matter, be it prime or proximate, how do such predications fit his general theory of predication? For example, Michael Loux raises the puzzle that, on either view, the predication of a form of matter looks different from the predication of an attribute of an individual substance: 'this [stuff] is a dog' appears to have a logical structure difference from 'Fido is a dog; a constitutive 'is'

<sup>72</sup> Heinz Happ, *Hyle*, pp. 662-4, lists and discusses other passages. Also G. E. L. Owen, "Particular and General," p. 287. Often it is not clear whether it is the form or the composite substance, the compound of matter and form, i.e., the individual substance, that is said to be predicated of the matter. I shall follow current custom here.

<sup>73</sup> Joan Kung, "Can Substance be Predicated of Matter?," p. 130.

<sup>74</sup> Michael Loux, "Form, Species, and Predication," pp. 7-10; R. M. Dancy, "On Some of Aristotle's Second Thoughts about Substance," pp. 406-10; also Michael Woods, "Form, Species, and Predication in Aristotle," pp. 413-4. Even Joan Kung, "Can Substance be Predicated of Matter?," p. 153, admits this as a plausible, alternative interpretation.

versus a copulative 'is'.<sup>75</sup> So Aristotle has a problem. For he makes no such distinction too clear, and certainly does not formalize it in his logical writings.<sup>76</sup>

The solution is that the predication of the matter of the form would require no different logical structure of predication. On the aspect theory of predication, the 'is', in an assertion of being *per se*, makes an existence claim, that can have further determinations. So, given that matter, be it prime or more proximate, is the subject, a predication of the matter asserts the matter to exist. In a statement of *tertium adiacens* the existence becomes determined further, by one of the terms classified by the categories. For a statement of being *per se* has such further determinations. In this way, the predications of matter would have the same logical structure as the predications of individual substances. Accordingly, the aspect theory would explain how Aristotle can hold that the former is predicated of matter as attributes are predicated of the individual substance—whether the matter be prime or not.

So why then not conclude that Aristotle allows the form to be predicated of the matter, even of ultimate, prime matter? Consider again 1029a24 where Aristotle says that "the ultimate *per se* is neither something nor a quantum..." Aristotle is looking for what is being *qua* being, what is primarily, and has being *per se*. Let us take the second, more likely reading discussed above, namely that by "the ultimate *per se*", Aristotle means 'the matter taken by itself, apart from any determinants'. Its being *per se* would constitute a bare assertion of existence. As this existence may be determined in different, contrary ways, it by itself describes neither a substance nor a quantity etc. But the prime matter itself cannot have all these contrary determinations without contradiction in an assertion of being *per se*: it would be, *in re* and in act, both dog and rock; dog and not-dog. Not even denials can determine its being *per se* further, since these denials (i.e., metathetic affirmations) would make assertions of being *per accidens*. That is, the matter by itself, as such, is not any particular thing, even though in fact it does constitute a particular thing at any particular time. The matter of this dog, considered by itself, apart from its constituting that dog, is not this

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<sup>75</sup> Michael Loux, "Form, Species, and Predication," pp. 7-8; 17-8. So too Jacques Brunschwig, "La forme, prédicat de la matière?," p. 138, says that if form predicated of matter this may be a metaphorical and not strict type of predication. Cf. Joseph Owens, *The Doctrine of Being in the Aristotelian Metaphysics*, Third Edition, p. 201.

<sup>76</sup> Thus, Joseph Owens, "Matter and Predication in Aristotle," p. 99; 102, holds that for Aristotle a substance and a substantial form can be predicated of matter [paronymously] and that matter has essential predicates like 'indestructible'. He admits that ordinary language has problems. He proposes a Quinean reading of the predication of the form of the matter: "The best you can do, perhaps, is to say that matter is humanized, equinized, lapidified..."

dog. At best the matter by itself “is” a dog in the sense of ‘being able to be (constitute) a dog’ or “is” *per accidens*, because the dog is (*per se*) material, and that material is (*per accidens*).<sup>77</sup> Hence Aristotle denies that a predication of the matter can make an assertion of being *per se*. As a result, a predication of prime matter carries no existential import, as there is present, *in re* and in act, no subject capable of further determination. So too Aristotle says at 1049a24-7 that if fire were prime matter it would not be a this. For ‘fire’ would not then present a subject able to be determined further.

In this way, Aristotle’s rejection of the basic subject’s being ultimate or prime matter agrees with his views on being *per se*. For something said to be *per se*, Aristotle says, must be capable of further determination; if prime matter is not so capable, then prime matter cannot be said to be *per se*. Rather, the primary subjects are names of singular substances that can be specified and determined further.

So what Aristotle says in *Metaphysics* V.7 about being *per se* has direct relevance to what is said in *Metaphysics* VII.3. In the latter passage Aristotle considers substance in its role as the ultimate subject. He then considers whether matter, form, or their compound is the ultimate subject, of which all else is predicated. Aristotle has defined matter as what is neither a particular thing, or substance, or a *quantum* or a *quale* etc. Still matter is supposed to be real. Then matter would really exist. This means that matter would be, *per se*. But matter cannot be specified further, as a substance or *quantum* or *quale* etc.: for it *per se* is neither substance nor *quantum* etc. Hence matter is not, *per se*. But then matter cannot be an ultimate subject for statements about what is *per se*. Consequently Aristotle rejects matter as the ultimate subject because it is not something separable and individual (τόδε τι). For ‘τόδε τι’ suggests a specification, being ‘a this-here somewhat’, of what has being *per se* or real existence.

In sum, in *Metaphysics* Z, Aristotle is asking: what is being *qua* being primarily? This amounts to asking: what is being *per se*.<sup>78</sup> Now suppose it is true that matter is *per se*. Then matter is, by itself, in its own right. Moreover, matter cannot be specified further, as being in one or another particular way (τόδε τι). But Aristotle insists that for something to be *per se* requires that it be able to be specified further, in the terms of one of the

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<sup>77</sup> So here Aristotle presents two options: 1) ‘the matter is *per se*...’ taken potentially and not actually 2) ‘the matter is *per accidens*...’; i.e., it can come to be something that is *per se*. Later, in *Metaphysics* IX.7, as I shall discuss, Aristotle takes the first option: the ‘is’ should be taken potentially.

<sup>78</sup> Cf. *Metaphysics* 1003a21-7 and *Posterior Analytics* 73b28-9 for this equivalence. Also see Allan Bäck, “What is Being *Qua* Being?”

categories. As matter cannot be so specified, it cannot be *per se*, and so cannot answer the question: what is being *qua* being?

In citing the view of those who hold matter to be the ultimate subject and substance, Aristotle does say that the accidents are supposed to be predicated of substance, and that of the matter.<sup>79</sup> Strictly his own view rejects this view. For matter is not “separable”, that is, it cannot exist in its own right, and has being only in being related to something else. Again, in the terms of *Metaphysics* V.7, this means that matter has being *per accidens*.

Still, the relation of matter and form is reflected in the structure of being *per se*. For the basic assertion, that S is or exists, must be able to be specified further. The specifications, as they signify items in the categories, corresponds to the form; the basic assertion of being, that needs completing to be in its own right, corresponds to the matter. Aristotle may be retaining this insight when he describes the genus as the matter. [*Metaph.* VII.10]

Again, we can understand Aristotle’s position that substance is primarily form, although form, like matter cannot exist by itself, that is, separately or *per se*. For the correlate of the form in the statement, the specification (‘P’), needs the context of the statement to have being. In particular it needs the “matter” of the statement, the bare assertion of ‘is’. Yet, still it is the specification of form that is the completion of the statement, the *telos* at which the bare assertion of existence aims, and the actualizing principle that makes the statement possible in the first place.<sup>80</sup>

This interpretation, based on this early text, resolves Graham’s complaint that Aristotle has matter being “both paradigmatically real and paradigmatically unreal.”<sup>81</sup> [231-2] Its reality is reflected in an assertion of simple being having central place in a statement of being *per se*; its unreality is reflected in that simple assertion’s being incomplete and requiring further specification to *be* a complete statement, and in that an assertion that matter *is* is an assertion of being *per accidens*.

Again, Graham distinguishes two conceptions of prime matter, a logical one derived from the abstraction of all determinate attributes (LPM), and a

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<sup>79</sup> Frank Lewis, “Form and Predication in Aristotle’s *Metaphysics*,” pp. 62-3; 79 nn. 13-4, claims that Aristotle holds it in his late period [= *Metaph.* VII]. But see Deborah Modrak’s critique of Lewis, in “Forms and Compounds,” pp. 86-7; 94-5. Michael Loux, “Aristotle and Parmenides: An Interpretation of *Physics* A8, pp. 308-10, also critiques Frank Lewis’ account, pp. 228-36

<sup>80</sup> M. Frede and G. Patzig, *Aristoteles ‘Metaphysik Z’*, Vol. 2, p. 38, hold that genus as matter has a predication relation, while prime matter has no predication relation.

<sup>81</sup> Dan Graham, *Aristotle’s Two Systems*, pp. 231-2. On the introduction of matter into Aristotle’s system see Allan Code, “The Persistence of Aristotelian Matter,” R. Jones, “Aristotle’s Introduction of Matter.”



scientific (PM) derived from providing for the continuity of a thing through change. He finds these two conceptions incompatible. As he notes, the two have many of the same features.<sup>82</sup> Why not then view the two as complementary, where the logical and scientific features are in parallel? Indeed, Aristotle's use of 'ὑποκείμενον', which readily moves between meaning 'subject' and 'substratum', supports such a parallelism.

So my view assumes a correspondence between the structure of statements and the structure of the world. The indeterminate 'is' being specified by a determinant, 'P', reflects the structure of matter and form. Aristotle makes all statements reflect this structure through restating other verbs ('walks') to make 'is' be stated explicitly ('is walking'). This correspondence, following upon Aristotle's regimentation of ordinary language, produces a continuity between Aristotle's logical and scientific thought. For better or worse, Aristotle in any event seems tied to it.

E.g., Aristotle says that the form of a human being is the soul, and surely the human soul is distinctly what it is more by being rational than by being animal. [*Metaph.* 1037a5] Further, it is the *differentia* that signifies the substantial form, while the genus signifies the matter. Note that this ontology does not merely reflect Greek grammar and vocabulary. Rather, Aristotle regiments what can be said, strictly speaking, in his technical Greek, in order to reflect his ontology. He picks out or invents new terms for genera and *differentiae*. We have seen this exemplified in his reduction of 'a man walks' to 'a man is walking'. Other examples include his reduction of paronymous terms [*Cat.* 10a27-b7], making up new words for various virtues and vices [*Eth. Nic.* II.7], social relations [*Pol.* 1253b11], genera of animals [*Part. An.* I.4; *An. Po.* 98a13], and his doctrine of unnatural predication [*An. Po.* I.22], where he rejects ordinarily acceptable statements as true strictly speaking. Aristotle does not have an ontology reflecting the structure of the Greek language, but a technical, protocol language reflecting his ontology. As Plato had said, the true dialectician tries to speak articulately, so as to separate reality at its joints. [*Phdr.* 265e]<sup>83</sup>

I have argued that Aristotle holds that neither the form nor the composite substance can be predicated of the ultimate matter, and that what he says agrees with the aspect theory of predication. Now the same arguments hold for predications of proximate and less ultimate matters. E.g., this (wood), considered as matter in abstraction from that which it composes, is equally a casket or a house; hence a casket and not a casket. So even if this (wood) is, in fact and act, now a casket, it in itself is merely that material that has the potential for being a casket as well as a house, bed, etc. Thus in *Meta-*

<sup>82</sup> Daniel Graham, *Aristotle's Two Systems*, pp. 224-8.

<sup>83</sup> Porphyry, in *Cat.* 55,10-4; 56,10-4; 124,4-5; 116,14-35; 129,19-20.

*physics* IX.7 Aristotle says that the proximate matter—only that and not some more remote matter—“is” the compound thing (and form?) only potentially and not actually. E.g., ‘this (wood) is a casket’ asserts that the wood can come to be a casket if nothing prevents. In this way he allows for the predication of the substance, and perhaps of the form, of the proximate matter. But he takes such predications as potential, and not actual.<sup>84</sup> That is, such predications are problematic, in the sense of *Metaphysics* V.7.<sup>85</sup>

Aristotle allows for the conversion of such problematic predications. ‘This (wood) is a casket’ converts into a derivative predication (rather like paronymous predication, to be discussed in Chapter Five): ‘this casket is wooden’, e.g., is made of wood. I shall call such predications ‘compositional’. But, just as Aristotle does not allow the actual predication of the form or composite substance of the matter, so too he does not allow the actual predication of the matter of the form or composite substance, but only a compositional predication (the constitutive ‘is’).

But why should we not take compositional predication as an actual predication? After all, ‘the casket is wooden’ seems to assert that the casket, an individual substance, exists and is in fact made of wood. Aristotle will not allow this sense in his protocol language, if the proposition is taken to be the converse of ‘this (wood) is a casket’. [1049a22-4] To be sure, in many contexts, ‘this is my house’ and ‘my house is made of bricks’ are used of actually existing houses. But they may equally well be said about a house under construction. The ‘is’ should then be read as ‘is potentially’ or ‘is going to be, if nothing prevents’. In *Metaphysics* IX.7 Aristotle is speaking of the latter context, where there is no actual house.

As for the former context, when the actual house, e.g., exists, Aristotle holds that ‘this is my house’ must be excluded, strictly speaking, as it is an unnatural predication. For here the individual substance is being predicated, and he rules this out in *Posterior Analytics* I.22, as I shall discuss in Chapter Six. As for ‘this house is wooden’, where there is an actual house, Aristotle allows it as an actual predication, along the lines of ‘the dog is an animal’: he compares the genus to the matter. [*Metaph.* VII.10]<sup>86</sup> In short, statements like ‘the casket is wooden’ are ambiguous, depending on whether or not they are taken to convert with ‘this (wood) is a casket’.

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<sup>84</sup> See n. 77.

<sup>85</sup> D. W. Hamlyn, “Aristotle on Predication,” p. 125, says that ‘the bronze is a statue’ is a case of genuine and not *per accidens* predication. I agree with that but still hold that the predication is not actual.

<sup>86</sup> He allows it in *Metaphysics* IX.7. But as with other paronymous predication, compositional expressions like ‘wooden’ do not signify items in the categories, and so Aristotle might reject ‘wooden’ as a real predicate, strictly speaking.

In sum, I have claimed that Aristotle holds that, strictly speaking, in his protocol language, matter cannot have its form (or its composite substance) predicated of it. Yet matter, not prime matter but proximate matter, can have its form predicated of it 1) if the predication be taken to be problematic but not actual, or 2) in ordinary discourse. E.g., ‘this (wood) is a casket’ means 1) that this wood has the potential to be a casket (along with the usual assumption that it has been so actualized); Aristotle accepts this predication, strictly speaking, and allows its conversion into a derivative, compositional predication, ‘this casket is wooden’ 2) that ‘casket’ is predicated of ‘this (wood)’ in a normal, actual predication; Aristotle rejects this predication as “unnatural” and excludes it from his protocol language.<sup>87</sup>

### *Conclusions*

I have argued that what Aristotle says about the meanings of ‘be’ in philosophical use at his time is consistent with the aspect theory of predication. Indeed, not only does aspect theory agree with the senses of being that Aristotle enumerates, but it also agrees with and explains some of the ways in which Aristotle wants to emend and make more precise the usage of ‘be’ in its various forms. This project is reflected in his metaphysics as well as in his logic. In this way, when Aristotle argues that substances have being primarily, and accidents only secondarily, he says that the being of the accidents depends on there being substances present in which they can inhere. Accidents are aspects and qualifications of substances, not *vice versa*. Again, universal substances, the species and genera, are, or exist, secondarily, because for them to be also requires the existence of singular, primary substances.<sup>88</sup>

Aristotle does more than make claims consistent with the aspect theory of predication, and hence with his holding it implicitly. More than that, he seems to state its key features, albeit obscurely, in his discussion of being *per accidens* and being *per se*: he singles out a special sense of ‘is’, being *per se*, in contradistinction to being *per accidens*, for technical usage. An affirmation of being *per se* states that the subject exists, *in re*, and that this assertion may be qualified further, via a term from one of the categories.

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<sup>87</sup> Or, it might be taken as in the ‘ὅτι’ construction discussed in Chapter Two. A predication of an accident, like ‘this is green’ can be taken in yet another way: here ‘this’ refers to the individual substance, and then the statement is one of actual *per se* predication.

<sup>88</sup> In this way we should understand *Categories* 2a11-9, that substance is primarily predicated of individual substance and only secondarily of species and genera. We need not conclude with G. E. L. Owen, “Dialectic and Eristic in the Treatment of Forms,” p. 109, that Aristotle requires two senses of ‘substance’—or two predication relations.

Aristotle uses ‘being *per se*’ thus: 1) ‘being *per se*’ is said of those items S such that ‘S is’ is true, where ‘S’ signifies an item in the categories and ‘is’ signifies real existence. 2) ‘S is’ can be expanded into ‘S is R’, where ‘R’ signifies a category.<sup>89</sup> ‘Being *per se*’ does not signify essential predication, nor does ‘being *per accidens*’ accidental predication, although the two pairs of distinctions have intricate links. This amounts to the “real presence with hooks”, as I have characterized the aspect theory. This results agrees with some recent work on Aristotle’s views on being and essence.<sup>90</sup> As the other senses of ‘is’ overlap with ‘is’ *per se*, and as Aristotle prefers truth to falsity and the actual to the possible, we may conclude that for Aristotle the usual sense, the default value, for ‘is’ is: ‘is’ *per se*, actually and truly.

But Aristotle has made these remarks in his ontological pursuits. Surely his logical doctrines have more relevance to determining what are his views on predication. So I shall turn to them next. But I hope to have shown at this point that the aspect theory of predication at the least agrees with, if not captures the structure of, ancient Greek usage of ‘be’ and Aristotle’s own metaphysical enterprises.

Es wird in der Literatur öfters die Ansicht vertreten, das ‘*εἶναι*’ in ‘*τὸ τί ἦν εἶναι*’ habe eindeutig existentielle und nicht bloss prädikative Bedeutung. Es scheint aber gerade charakterisch für die Auffassung des Aristoteles, dass bei den Dingen, die überhaupt ein *τί ἦν εἶναι* haben, das Sein (die Existenz) und das So-bestimmt-sein zusammenfallen.

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<sup>89</sup> In effect this is the fused sense of ‘is’ suggested by Montgomery Furth, “Elements of Eleatic Ontology.” See too Rick Van Brennekom, “Aristotle and the Copula,” pp. 1-2. Van Brennekom errs, however, in equating being *per se* and essential predication and in his treatment of negation.

<sup>90</sup> Michael Frede and Günther Patzig, *Aristoteles ‘Metaphysik Z’*, Vol. 2, p. 35.

## CHAPTER FOUR

### THE STATEMENT

In the following five chapters, I shall examine Aristotle's logical writings in order to determine whether he holds the aspect theory of predication there, and, if so, whether explicitly or implicitly. In discussing *Metaphysics* V.7 I have already pointed to evidence that he holds the aspect theory explicitly in giving the meanings of 'is' in current philosophical Greek usage. Yet, I admit, that text is obscure, and may be tainted, perhaps due to Aristotle's mixing his own views with the views that he is enumerating, or perhaps to his changing his mind in other (presumably later) texts. In any case, I would not want to say that Aristotle himself held the aspect theory of predication if his logical views directly or indirectly opposed it.

Hence I shall examine those parts of Aristotle's logical theory that pertain to the aspect theory of predication. In order to provide some focus for my investigation, I shall consider in turn Aristotle's views on the following topics, to the extent that they bear on the aspect theory: 1) the statement 2) the figures of predication (the categories) 3) types of predication 4) negation 5) inference.

To end the suspense, let me announce that I shall maintain that Aristotle does maintain the aspect theory of predication in his logical works. He does not state it too clearly. Whether this results from his making new, pioneering efforts in logic, or whether he finds the aspect theory perfectly obvious from the ordinary meaning of Greek, or whether he has just not thought it out with much detail and precision, I am not certain. Still, I submit, and shall try to prove, that the aspect theory fits Aristotle's texts a lot better than its competitors.

The main competitor to the aspect theory I call the *copulative theory of predication*. Of course, many other competing theories are possible: for instance, the theory of Jevons that all predications are identity statements. But the copulative theory seems to be the main, and indeed dominant, alternative within the Aristotelian tradition itself, as well as today among Aristotle scholars.

In brief, on the copulative interpretation, the copula 'is' changes its logical function depending on its sentential context. In a statement of *secundum adiacens*, it makes an existence claim: 'S is' means that S is existent. In a statement of *tertium adiacens*, it connects the predicate term to the subject: 'S is P' means only that 'P' belongs to S, and makes no existence claim.

The copulative theory has dominated large portions of the Aristotelian tradition. Among others, Aquinas held it, and Thomist interpretations of Aristotle have had and have great influence. Dominant and plausible though the copulative interpretation may be, I shall argue that the copulative theory is not Aristotle's. To hazard an historical guess, I think that the copulative theory may have come to dominate as a result of the neo-Platonizing interpretations of Aristotle's works by such as Proclus, Ammonius, and Boethius. I shall present what evidence I have for this guess in Chapter Nine, although I do not find it conclusive.

Recently many scholars have written on Aristotelian "predication". Most of what I shall say about predication does not bear directly on much of their discussion, as it tends to focus on "metaphysical predication", and to concentrate more on ontology than on logical structure. Nearly all these writers assume, mostly tacitly, a copulative theory of predication. However, if my aspect theory of predication stands as an interpretation of Aristotle, much of their work will have at least to be reformulated. Still, much of it can stand, albeit in restated form.

For instance, Frank Lewis has a complicated discussion of statements of self-predication and identity in Aristotle.<sup>1</sup> These statements have a straightforward reading on the aspect theory. However, Lewis et al. seem to find Aristotle's treatment of these statements obscure and ambiguous. But, perhaps, I shall suggest, the copulative reading contributes to the obscurity more than Aristotle's doctrines do.

Again, Lewis et al. find an inconsistent gap between the theory of predication in the *Categories* and that in the later books of the *Metaphysics* [VII.6].<sup>2</sup> The early Aristotle, they claim, shares the assumptions with Plato's theory of the *Sophist*, while the later Aristotle has broken with those assumptions. But this difference too may follow from an erroneous, copulative reading of Aristotle's logical theory of predication, both early and late.

As in earlier chapters, I shall continue to apply the aspect theory to solve problems in understanding Aristotle's philosophy: the status of *differentiae* and *propria*; the relation of *Categories* 2 and 4. Accepting the aspect theory does not require accepting my results on such problems. Still, showing the fertility of the aspect theory for solving problems in Aristotle's philosophy does give indirect support to the aspect theory.

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<sup>1</sup> Frank Lewis, *Substance and Predication in Aristotle*, pp. 41-8.

<sup>2</sup> Frank Lewis, *Substance and Predication in Aristotle*, pp. 46; 144-5. So too for Joan Kung, Terry Irwin, Daniel Graham. (See Chapter Three for references.)

*The Nature of a Statement*

In the present chapter, I shall examine Aristotle's views on the statement and its structure. The relevant material appears chiefly in the early chapters of *On Interpretation*. These chapters are quite sketchy and have obscurities for that reason alone if not for many others. But too, some of those obscurities may follow from our trying to impose an uncongenial theory upon our reading of the text. That uncongenial theory, I claim, is the copulative.

Aristotle views a statement (λόγος) as the linguistic utterance, i.e., the "logical" type, tokens of which may be uttered on different occasions by different speakers. So for Aristotle statements may change their truth values. [*Cat.* 4a22-6]<sup>3</sup> For 'Socrates is sitting' may be true at one time and false at another. [*Cat.* 4a23-6] Moreover, statements might then seem to be able to change even their meaning, but for Aristotle apparently not. For instance, 'someone is sitting' not only might change its truth value, but might make claims about different people over time; likewise for 'Socrates is sitting': 'Socrates' may name a man and a dog. [*Soph. El.* 175b19-21] However, Aristotle does say that a statement remains immobile in every way, while the object changes. [4a34-6]<sup>4</sup> That is, the words remain the same in what they signify, sc. objects and attributes, while a single object, the subject, changes these attributes. Aristotle seems to think that the same sequence of words, when used to make claims about different objects, is ambiguous, and so should not count as a single statement. [*Soph. El.* 175a41-b6]

Consequently a statement, in Aristotle's sense, is not the grammatical "statement" or sentence, the grammatical type of tokens of words put in a certain order. For the same grammatical sentence can be used to make different "statements" with different meanings and with different subjects, as with 'Socrates is mad' and 'someone is sitting': in the first, 'mad' can mean 'angry' or insane'; in the second, 'someone' (or even 'Socrates') could name different subjects at different times. For Aristotle, each statement, oral or written, signifies one and only one thought. [*Int.* 16a2-3; 16a9-11] Aristotle seems to think that the thought that someone is sitting remains the same, that is, has the same meaning, when it continues to signify the same person as having the attribute of sitting at a present time. Furthermore, different grammatical sentences, sc., different strings of words, can express the same statement. An obvious case is to take a sentence and then to replace one of the terms in it by its definition. [21a29-30] The two sentences then

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<sup>3</sup> Gabriel Nuchelmans, *Theories of the Proposition*, pp. 40-1.

<sup>4</sup> Michael Ferejohn, *The Origins of Aristotelian Science*, pp. 110-1, strangely claims that Aristotle does not recognize context-dependence.

express the same statement, for a thing is identical to its essence, and that identity implies that attributes of the one will be the attributes of the other. [*Top.* 139a24-b5; *An. Pr.* I.39; *Metaph.* 1031b18-22]<sup>5</sup> Hence a statement (λόγος) for Aristotle is not the grammatical sentence nor its grammatical type, in the sense of a written sequence of words, regardless of its context of use. Rather a statement is a logical type, perhaps of various grammatical sentence types in different languages, where words signify the same objects and attributes. For Aristotle a statement is primarily about this invariant mental language of thought. [*Int.* 6a6-8] A statement may be a sentence in this mental language that can be signified by many spoken and written sentences. In his protocol, ideal language, Aristotle tries to pair each spoken and written sentences with such a statement.

Again, Aristotle's statements differ from the propositions of modern logic and philosophy. For propositions, in the modern sense, do not change their truth values, but presume a timeless perspective. Moreover, they are supposed to be independent of the circumstances of a particular speech act. In short, propositions are context-free and invariant, while Aristotle's statements are context-dependent and may vary in truth value, although they do not vary intensionally or semantically.

Aristotle's conception of statements might be criticized as being inconsistent. He does not think that a statement being made at different times, or "now's", has to make different claims about objects. Rather, it may express the same thought about objects, albeit at different times. He must suppose that since otherwise in every case the same statement made at different times would be ambiguous and not a single statement. For he has said that a statement may remain the same over time while changing its truth value. However, he does not allow the same string of words to be the same statement when its subject term refers to different objects, and so makes a multiplicity of claims. But why should not a multiplicity of times create ambiguity, given that a multiplicity of speech act contexts that produce different subjects for the same statement does so?

Aristotle might have a response to this objection: he has a relative conception of time and views the present as the moving now. I shall not pursue this issue but wish only to note the unusual features of Aristotle's conception of the statement.

In support of the aspect theory, note that Aristotle calls a false statement "the statement of not-beings, *qua* false." [*Metaph.* 1024b26-7] Presumably

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<sup>5</sup> It is noteworthy that in the *Topics* passage Aristotle uses 'λόγος' in the sense of 'statement' of the definition of the term. 'Statement' here though must mean a cluster of terms equivalent to the *definiendum*, as 'λόγος' has to be true of that of which the name is true. [139b25-6]



then, a true statement, insofar as it is true, is a statement of beings. Here Aristotle implies that a true statement must concern a subject that exists. So existence is built into the statement. The aspect theory is meant to reflect that. In this passage, Aristotle proceeds to divide statements into statements of the essence and into those not of the essence but presumably of accidents, which the essence “suffers”. [1024b29-32] So Aristotle admits true, existential statements having both essential and accidental predicates. In Chapter Two, I have noted how Plato in the *Sophist* links the possibility of statements’ being false with not-being. Aristotle follows Plato here in his theory of the statement: the parts of a statement of being *per se*: all signify real things, although their combination with one another may not obtain.

I turn now to Aristotle’s views on the structure of a statement. Notoriously, Aristotle is thought to have two mutually inconsistent theories of the statement, a bipartite, name-verb analysis, and a tripartite, subject-copula-predicate analysis. After sketching out those theories, I shall consider whether the aspect theory of predication offers any hope of reconciling them.<sup>6</sup>

### *The Bipartite Analysis*

For Aristotle a (simple) statement consists, minimally, of a name and a verb. A name signifies something definite and simple, independently of time [*Int.* 16a19-20]; a verb signifies something said of something else and in addition signifies present time. [16b6-7] Aristotle takes a name to be a noun in the nominative case and, in most cases, a singular one. He takes a verb to be in the present tense, and concentrates on the third person singular and on the indicative mood. [16b16-7] The other cases of nouns and the other tenses of verbs he calls “inflections” (πτώσεις) of the name and the verb. So he does not think that names and verbs are inflections. Also, strangely, he considers their other grammatical forms to be inflections of them: strangely so, since the grammatical forms of names and verbs do not provide a base form for conjugations and declensions as they do for the statement.<sup>7</sup> So the notion of “inflection” here does not seem to be grammatical either. Aristotle is treating the nominative third-person (singular) construction indicating present time not as one grammatical complex

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<sup>6</sup> In what follows, I use ‘copula’ grammatically and not logically. (See Chapter One.) In this way the tripartite theory need not support the copulative theory automatically.

<sup>7</sup> Ammonius, in *De Int.* 43,2-20, notes that the Stoics argue that all cases of the noun are inflections of the name and objects of the mental language, whereas the Peripatetics follow Aristotle and deny that the nominative case gives an inflection of the name.

among many, but as something special, with reference to which all the other constructions are said. It derives its primacy from the primacy of his logical type of statement. It is interesting how much he ignores statements in the first, second, and dual persons.

Like 'statement', 'name' for Aristotle does not stand for a grammatical type, but for a logical type. He determines what counts as a name by considering how the name signifies objects. Once more his ontology determines his logic and grammar more than his logic determines his ontology.<sup>8</sup>

Consequently, although Aristotle makes some grammatical remarks, he does not seem especially concerned about providing many grammatical details about statements. He does say that neither a name nor a verb by itself constitutes a sentence or statement, but that a name and verb need to be put together as parts of a whole to constitute one. However, he is generally silent on syntactic conditions for how a name and a verb can come to constitute a statement. E.g., he has no remarks here about the agreement of name and verb nor about word order although he does have some in his *Rhetoric*.

One grammatical remark that he does make shows how focused Aristotle is on the third-person singular name-verb construction, or, if you like, how careless or insensitive he is to grammatical use. He remarks that an inflection of a name, like 'of Philo' (genitive) or 'to Philo' (dative), when combined with 'was' or 'is' or 'will be', does not make a statement. [16a32-b5] At the very least Aristotle owes us more explanation here. For 'is' plus the dative or the genitive does produce a whole sentence in ancient Greek, given that the verb supplies the pronominal subject, as it normally does. Thus, 'it is Philo's' and 'it is (i.e., belongs) to Philo' are respectable statements, composed of 'is' ('ἐστίν') plus an inflection of a name.<sup>9</sup> I have already noted that Aristotle ignores such constructions also in his enumeration of the meanings of 'be'.<sup>10</sup>

Here Aristotle has a bipartite structure of a statement: name plus verb. The name may be any sort of noun in the nominative case, although Aristotle favors proper names and common (count) nouns, and avoids abstract nouns. The verb may be any transitive or intransitive verb, although Aristotle avoids impersonal verbs in simple statements, and does not use transitive verbs having direct objects much either.

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<sup>8</sup> John Cook Wilson, *Statement and Inference*, Vol. 1, p. 135, gives a grammatical analysis of 'name'. At best this is misleading. But cf. pp. 124-6 where he clearly distinguishes the grammatical from the logical analysis of sentences.

<sup>9</sup> Ammonius, in *De Int.* 43,24-44,2; Charles Kahn, *The Verb 'Be' in Ancient Greek*, pp. 167-9; Hermann Weidemann, *Aristoteles Peri Hermenias*, p. 172.

<sup>10</sup> See Chapter Five, n. 92.

A statement is composed of a name as subject and a verb as predicate. Aristotle says that, if a statement has a truth value, then it is a declarative statement. [17a2-3] He does not seem to worry about sentences like imperative ones that have no name explicitly there. Why does not Aristotle think of defining statements syntactically, e.g., as a sentence with a verb in the indicative? To be sure, grammatical theory was not too elaborate in his time. In any event, once more Aristotle ignores the grammatical in favor of the logical and the ontological.<sup>11</sup>

Both a name and a verb, Aristotle says, signify something. Aristotle's phrasing avoids much specification about what sorts of things. (He uses pronouns when he says this.) Names and verbs are simple expressions in the sense that no proper part of them signifies anything "*per se*". [16a21] Verbs differ from nouns in "additionally signifying (*προσσημαῖνον*) time" and in being signs "of those said of another." [16b6-7] Aristotle says that verbs are signs "of those belonging (*ὑπαρχόντων*), as in those belonging of a subject." [16b9-10]

Now a "verb" (*ῥῆμα*), literally 'what is spoken', normally is a sign of a something non-verbal.<sup>12</sup> A verb is not a sign of the predicate of the sentence, but rather of something signified by the statement. This thing is "stated of" another, which is the subject, the object that the subject term names. [17a21; 17a28] So the verb seems typically to be a sign of an attribute of a real object. Aristotle also says that the verb "belongs" to the subject. This use of *ὑπάρχει* suggests again that the verb, or rather what is signified by it, still has its own being.<sup>13</sup> *ὑπάρχει* also means 'subsists' or 'is real'.<sup>14</sup> Despite Aristotle's repeated use of 'said of' (*λέγεται κατά*), apparently a verb need not be "said of" a subject in the sense of essential predication specified in *Categories* 2. For Aristotle gives examples of verbs signifying accidental attributes of the subject: e.g., 'he heals'. [16b9; 19b6-7; *An. Pr.* 24a17]<sup>15</sup>

<sup>11</sup> Aristotle does recognize other parts of speech besides noun and verb. See *Poetics* 20.

<sup>12</sup> Walter Cavini, "La negazione di frase nella logica Greca," p. 12, notes that Aristotle uses *ῥῆμα* in the sense of predicable, or predicate complement, at 20b1-12. Also cf. Hermann Weidemann, "Aristoteles über das isolierte Aussagenwort," p. 239 n. 1. L. M. De Rijk, *Plato's Sophist*, pp. 222-34, notes that for Plato too *ῥῆμα* is not necessarily a one-word expression.

<sup>13</sup> L. M. De Rijk, "On Aristotle's Semantics in *De Interpretatione*," p. 125, says that Aristotle is not defining *ῥῆμα* in general but is marking off a special sense of *ῥῆμα*. This claim fits with my view that Aristotle is considering only those expressions that signify beings *per se*.

<sup>14</sup> See the section below on *ὑπάρχει* for the significance of the use of this word.

<sup>15</sup> Ernst Tugendhat, *ΠΙ ΚΑΤΑ ΤΙΝΟΣ*, p. 23, claims that 'said of' indicates a certain structure of being (*Seinsstruktur*). Cf. *Prior Analytics* 49a6; 83a22; Anonymous, in *De Int.* 7, 12.

The other distinctive property of a verb is that it “additionally signifies” present time. [16b6]<sup>16</sup> This remark has great importance for my project as it gives clear evidence of what Aristotle means by “additionally signify”. First, verbs clearly have different significations, as they signify different attributes. ‘Walks’ signifies the act of ambulation; ‘hurts’, taken intransitively, a passion or feeling of pain. Second, verbs, Aristotle says, “additionally signify the belonging (‘ὑπάρχειν’) now.” A verb like ‘walks’ signifies *both* the act of ambulation *and* the time at which that act is claimed to occur: namely, now. Likewise, ‘walked’ signifies the same act and past time. My point is that, at least in this passage, when Aristotle uses “additionally signify” (προσσημαίνει), he implies that something has two significations, one, concerned with the thing that it signifies, usually an attribute, and an additional one concerned with the time of the utterance of the statement. Aristotle seems to use ‘additionally signify’ with this same meaning also at 20a13.

At the end of *On Interpretation* 1, Aristotle says that for a name to signify something true or false, it must have ‘is’ or ‘is not’ attached to it, “either simply or in virtue of time”. [16a17-8] De Rijk takes the contrast of ‘ἀπλῶς’ versus ‘κατὰ χρόνον’ here as “‘simply or with reference to time’”—not as Ackrill et al. have it, as present time versus other times.<sup>17</sup> However, perhaps we should understand the contrast as ‘without qualification’ versus ‘as of now’ (*ut nunc*). [*An. Pr.* 34b7-8; *Top.* 102a22-30; *De An.* 433a5-10] E.g., ‘all dogs are sitting’ may be true at the present time, as of

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<sup>16</sup> Anonymous, in *De Int.* 9,6-8 discusses present time and refers to *Physics* 222b6.

<sup>17</sup> L. M. De Rijk, “On Aristotle’s Semantics in *De Interpretatione*,” p. 120. Again, in his review of Hermann Weidemann’s *Peri Hermeneias*, p. 271, De Rijk takes ‘ἀπλῶς’ to indicate timelessness. He cites *Prior Analytics* 71b34-72a5; *Topics* 115b29-35; *On Generation* 314b7; 317b5-7; *On the Heavens* I.9. Other views include Ulrich Nortmann, *Die modale Syllogismen*, p. 45, who takes it to mean ‘for all times’, and Gisela Striker, “Notwendigkeit mit Lücke,” p. 159, who makes it into a type of necessity. My view generally agrees with these conceptions, while keeping the necessary and the categorical distinct.

The text is so sparse that I can think of other, less plausible ways to make the distinction. We can make a distinction between two ways in which a statement like ‘a goat-stag is not running’ may be understood. There is a sense in which it is true that a goat-stag is not running—since it is not doing anything (real). So in that sense that statement is true. But that statement is not true in a usual way. The fact of the goat-stag’s not running is not fixed onto a definite time—it is true at all times, without your having to look, or, better, in Quine’s terms, it is a standing sentence. In usual contexts to assert that a goat-stag is not running implies the existence of goat-stags. In this usual sense, since the goat-stag does not exist now, and the present tense, ‘is running’, makes the claim, or at least conversationally implies, that the subject, goat-stag, exists now, that sentence is false. Perhaps Aristotle is thinking of such cases in making this distinction. Or perhaps as in ‘Socrates is running in the race’ said when he is actually running or on the day that he is running. Or perhaps: ‘Socrates is a man’ said of Socrates in general, or of Socrates who is busy being human right now.

this “now”, but it is not true generally, without qualification, at other “now’s” or times that come to be present, that all dogs are sitting. ‘Is’ taken simply still has a time reference, namely, to all cases that presently obtain taken as typical. This interpretation reconciles Aristotle’s description of the universal said “of every” (κατὰ παντός) as being at all times, “not sometimes so, sometimes not” with his insistence that the statement concerns present time. {An. Po. 73a28-9; ἀεί: 75a32} (The contrast works better for universal than for singular terms.) On either reading, Aristotle focuses on what exists at present.

Aristotle favors ‘be’ as his basic example of a verb. [16b3; 16b22-3; 17a12] He does use other examples of verbs: ‘heals’ [16b11]; ‘walks’ [20a4]<sup>18</sup> Yet, from the viewpoint of the aspect theory of predication, Aristotle’s preoccupation with ‘be’ is no coincidence. We have already seen in *Metaphysics* V.7 his reduction of other verbs to an expression containing ‘is’ explicitly. In this way, Aristotle makes it clear that he considers every verb to contain at least an implicit assertion of ‘is’. In the previous chapter I have argued that for Aristotle the usual sense, the default value, for ‘is’ is *per se*, actually and truly. We may take ‘is’ here in this sense of real presence. That he considers verbs to make assertions of existence is also supported by his restricting the verb to present time. Otherwise a statement composed of name and verb could hold in virtue of past or future time, and then its truth would not make a claim about what exists (now). Aristotle relegates verbal expressions that do not contain an assertion of present existence to the secondary status of being “inflections” of verbs.

Of course these considerations provide only indirect support for the aspect theory. Aristotle’s assertion that ‘man is’ and ‘man is not’ are the fundamental forms of statement [19b14-5] provides direct support, as I shall discuss next.

This analysis of the statement’s having two parts, name and verb, as presented in the early chapters of *On Interpretation*, has difficulties in being reconciled with other texts that present a tripartite analysis of name, copula, and verb.<sup>19</sup> When I discuss those texts, I shall deal with this issue.

### *The Fundamental Form of Statements*

In a passage that has embarrassed modern commentators, Aristotle says:

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<sup>18</sup> Aristotle has problems handling sentences with direct objects, where the sentence seems to assert a relation holding between things. Cf. Hermann Weidemann, *Aristoteles Peri Hermenias*, p. 178, for a discussion of the problem and the literature.

<sup>19</sup> J. L. Ackrill, *Aristotle’s Categories and De Interpretatione*, p. 119.

So the primary affirmation and negation are: 'a man is', 'a man is not'; then, 'a not-man is'; 'a not-man is not'... [19b14-7]

Here Aristotle says that the basic form of the affirmative statement is 'S is', which we may understand as 'S exists' or 'there is an S'. Just before saying this, Aristotle has reiterated and referred to his name-verb theory of the statement. So he appears to think that what he is going to say supplements and is consistent with that theory.

Modern commentators seem uncomfortable with this text and hurry on to the more congenial exposition of the tripartite analysis of statements as consisting of subject, copula, and predicate.<sup>20</sup> Yet Aristotle does put them first even though he too makes hardly any use of these statements themselves as examples when he discusses such syntactic features as conversion and syllogistic inference.

Of course this passage supports the aspect theory of predication directly. For according to it the basic form of predication is 'S is', which then may or may not be qualified further.<sup>21</sup> So too we may understand the expression 'τὸ τί ἦν εἶναι' as what it is to be, which is then to be qualified further. There is no need to read it as the copulative 'what it is to be something'.<sup>22</sup>

Indeed, Aristotle proceeds immediately to make this very point about further qualification:

But when 'is' is additionally predicated, the antitheses are said in two ways. I mean as in 'a man is just' I say that 'is' is composed (*συγκέσθαι*) as a third name or verb in the affirmation. [19b19-22]

<sup>20</sup> J. L. Ackrill, *Aristotle's Categories and De Interpretatione*, p. 142. Indeed, David Bostock, *Aristotle's Metaphysics: Books Z and H*, pp. 49-50, seems to be headed towards an aspect theory despite himself: "What is missing, then, is some recognition of the 'is' that functions as a copula in an essential predication...perhaps he *also* equates the 'is' of a predication in one's own right with the 'is' of existence in one's own right..."

<sup>21</sup> Gabriel Nuchelmans, *Theories of the Proposition*, p. 29, recognizes in Aristotle an assertive use of 'is': 'is really so', and sees no reason why this sense does not continue to be present in all cases. Anonymous, in *De Int.* 31,8-19, describes the copula as a *σχέσις*, which again can be qualified.

<sup>22</sup> Emerson Buchanan, *Aristotle's Theory of Being*, pp. 36-7, says that 'τὸ εἶναι ἀνθρώπου' (being man) uses the dative 'ἀνθρώπου' as a dative of possession or interest and that 'εἶναι' there has to be taken without qualification, with no further predicate. In this sense 'to be' means 'to exist.' Hence 'τὸ τί ἦν εἶναι' should be read as what it is for something to be—an existential reading; not the copulative reading 'what it is to be something'. So Christopher Kirwan, *Aristotle's Metaphysics*, First Edition, p. 100, is wrong to speak of just what a man is. Cf. Friedrich Bassense, "Das 'τὸ ἐν εἶναι', 'τὸ ἀγαθὸν εἶναι' etc. und das 'τὸ τί ἦν εἶναι' bei Aristoteles," pp. 14-47; 201-22.

Aristotle has now moved on to the type of statements more familiar to us, the subject-copula-predicate statement of form, 'S is P'. In this case, he says, 'is' is "additionally predicated".<sup>23</sup> Above we saw that Aristotle used 'additionally predicated' to claim that verbs make two predications, in the very passage that Aristotle has referred to just before he makes this statement. [19b7-8] The simplest way to proceed is to assume that Aristotle is using 'additionally predicated' in the same way here. And why not adopt this interpretation?<sup>24</sup> For 'is' to be additionally predicated would then require it to be predicated of the subject,<sup>25</sup> as well as the predicate complement. Then 'S is P' would be analyzed as 'S is and P is said of (predicated of) S'. This analysis differs little from the aspect theory's 'S exists, in respect of being P'. For as 'P' specifies the way that S exists, 'P' truly describes S and so may be said of S.<sup>26</sup>

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<sup>23</sup> L. M. De Rijk, "On Aristotle's Semantics in *De Interpretatione*," p. 129, says that 'προσσημαίνειν' at 16b23 means 'merely helps to signify' a certain composition. Cf. 20a13.

<sup>24</sup> For such a use of 'προσκατηγορούμενον', cf. Alexander, in *An. Pr.* 369,34-370,6. Alexander, 40,18-9, also uses 'προσκατηγορούμενον' to explain the relation of 'possible' to the whole in a modal statement. Also cf. the use of 'προσσημαίνειν' at *On Interpretation* 16b6, and Ammonius, in *de Int.* 47,20ff., and the use of 'προσκατηγορήται' in Philoponus, in *An. Pr.* 52,18. One objection is that at 20a13 Aristotle says that 'every' "additionally signifies" nothing else than that the affirmation or denial of the name is universal. Here 'every' does not seem to have two significations. Or does it?—sc., also the other one that the subject is 'every S'. Gabriel Nuchelmans, *Theories of the Proposition*, p. 29, sees here an elaboration of the view that 'is', like 'every' and 'not', is a syncategorematic term.

<sup>25</sup> Ammonius, in *De Int.* 57,13-33, following Alexander, holds that the claim that 'is' "additionally signifies" ('προσσημαίνειν' 16b19) means that in itself it is nothing—sc., when stated by itself it does not make a complete statement; but signifies both the composition of the subject and predicate as well as a participation with being [57,26-8], one always needing combination. [Cf. *De An.* 430b2] (Charles Kahn, "On the Terminology for Copula and Existence," p. 150, sees this as the basis for Abelard's copulative theory.) However, elsewhere, 165,4-30, he argues that when Aristotle says that 'is' is "additionally predicated" [19b19] he means that 'is' connects the main predicate and is not predicated in its own right, but is only "supplementally predicated". He then gives examples where 'is' appears in a statement without being additionally predicated. He also says, 77,31-3, that only 'is' can be an additional predicate, although others had thought otherwise (as with 'a just man walks'). Cf. 176,17-177,18. The first claim accords with the aspect theory; the rest with the copulative theory. Perhaps the first passage merely recounts earlier views, as Ammonius is the main source for later versions of the copulative theory.

<sup>26</sup> I can agree with the claim that for Aristotle, 'Socrates is a man' is true "in virtue of his being that thing which constitutes existing for him (being which constitutes his mode of existence)," Hermann Weidemann, "In Defense of Aristotle's Theory of Predication," p. 84—only so long as that "being" be taken as an assertion of being *per se*. But Weidemann wants to take it merely copulatively. In "Prädikation," p. 1196, he says that when 'is' is used as *tertium adiacens* it has no meaning by itself, but merely signifies the connection of subject and predicate. Cf. his "Aristoteles über das isolierte Aussagenwort," p. 154.

Another feature of this passage that supports the aspect theory concerns the word order of the examples. The fundamental form that Aristotle gives has the form, 'ἔστι ἄνθρωπος' ('(there) is a man'). Here 'ἔστι' has the meaning of 'exists', it is generally agreed. In the statement of *tertium adiacens* where the 'is' is "additionally predicated", Aristotle uses the same word order with the new predicate's being inserted as a qualifier: 'ἔστι δίκαιος ἄνθρωπος', which might as well be translated as '(there) is a just man' as 'a man is just'. [17b8-10]<sup>27</sup> This word order suggests, once again, that Aristotle views the existence claim made in a statement of *secundum adiacens* to remain in one of *tertium adiacens*, but to have received further specification. The same word order occurs also in the cross-referenced *Prior Analytics* I.46 text. [51b28-9] To be sure, this evidence is not conclusive, but, on grounds of grammatical parallelism, it would be nice to have translations that run in tandem, all else being equal. Indeed, the Greek commentators seem to have read statements of *tertium adiacens* as giving a predicative complex ('\_\_ is a P-S') and then listing for which subjects the assertion holds.<sup>28</sup>

In Chapter Two I have noted a similar interpretation of Parmenides and Plato. Aristotle's use of "composed" [19b21] recalls the compositional reading: a statement of *tertium adiacens* makes the claim that the complex composed of subject and predicate ('S-P') exists.<sup>29</sup>

One objection to the success of the aspect theory here lies in Aristotle's description of 'is' in a statement of *tertium adiacens* as "third". Of course his description here provided the historical reason why these statements are said to be of *tertium adiacens* in the first place. But why does Aristotle call

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H. P. Grice, "Aristotle on the Multiplicity of Being," also rejects an existential reading of *tertium adiacens* and pushes for a copulative one. Cf. Alan Code, "Aristotle: Essence and Accident," pp. 414-7.

<sup>27</sup> Vincenza Celluprica, "Logica e semantica nella teoria aristotelica della predicazione," p. 181.

<sup>28</sup> Ammonius, in *De Int.* 161,37-162,3; 162,21-4; 185,26-186,5. Cf. F. W. Zimmermann, comm., *Al-Farabi's Commentary and Short Treatise on Aristotle's De Interpretatione*, p. lxvi; M. Soreth, "Zum infiniten Prädikat in zehnten Kapitel der Aristotelischen Hermeneutik," p. 396. See too the discussion of Ammonius in Chapter Nine. This approach might have been suggested by *Prior Analytics* 51b28-31; 51b41-52b4.

<sup>29</sup> Moses Matthen, "Greek Ontology and the 'is' of Truth," pp. 124-6, holds that Aristotle reads 'the man is running' as 'the running man is', and in doing so follows the *Sophist* and Parmenides. He connects this discussion to Aristotle's accounts of accidental unity [1015b17-9] and the alethic sense of 'be' [1017a31-5], discussed in Chapter Three. Walter Cavini, "La negazione di frase nella logica Greca," pp 40; 43, presents both interpretations and surveys those on each side.



'is' here "third" if the assertion of 'is' as 'exists' is to remain primary although specified further?<sup>30</sup>

Christof Rapp has argued that 19b21-2 should be read as stating that 'is', when it is "a third" should be taken not in isolation as a name or verb, but as combining with the name or verb.<sup>31</sup> In this way, we keep to a bipartite structure, even in a statement of *tertium adiacens*. That is, 'is' combines with the new predicate ('P') to form the verb. So a statement of *tertium adiacens* retains the bipartite structure.<sup>32</sup> Still, why does Aristotle call the 'is' the third, especially since it was one of the two elements in a statement of *secundum adiacens*?

In this passage Aristotle is developing the square of opposition. So he would naturally be focusing on the predicate as he is going to be distinguishing affirmations and denials with simple predicates ('P') from those with metathetic predicates ('not-P'). We have already seen also in *Metaphysics* V.7 that Aristotle says that 'be' said *per se* is said in as many ways as there are categories. There Aristotle shows an inclination to move on to the further specifications of 'is', that is, to the categorial predicates. Also Aristotle shows a tendency to speak of attributive adjectives as "predicates" of their subjects [21a7-8; *Metaph.* 1015a16-20]. Finally and most importantly, in his syllogistic Aristotle is oriented towards viewing statements as having two terms connected by a copula, which he indicates by a 'belonging to' ('ὑπάρχει') construction. In turn, this orientation itself stems from Aristotle's analysis of what is said to be *per se* or *per accidens* to make claims about the relation of an object and its attributes. All these factors move Aristotle towards having a tripartite analysis of a statement consisting of subject, copula, and predicate.<sup>33</sup> As the terms signifying objects and their attributes, namely the subject (S) and the predicate (P) terms, will have the most importance for such purposes, Aristotle would be inclined to view the copula, 'is', as being a third thing that is predicated, not as the main predication, but rather as an additional predication. The main

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<sup>30</sup> Anonymous, in *De Int.* 74,7-10, says that Aristotle simply is sloppy in describing 'is' as "a third".

<sup>31</sup> Christof Rapp, "Ἔστι Τρίτον," pp. 127-8. He translates it thus: "Mit 'ist als drittes' meine ich: daß das Nennwort oder Verb im Zusprechen zusammengesetzt est." [Cf. 16b23-5] Hermann Weidemann, *Aristoteles Peri Hermenias*, pp. 185-6 (see pp. 181-2 on 16b21-3), holds that 'is' by itself is nothing i.e., is a copula. I agree in the sense that it names no item in the categories and that it needs at least a subject to make a statement.

<sup>32</sup> Christof Rapp, "Ἔστι Τρίτον," p. 127.

<sup>33</sup> Jonathan Barnes, "Grammar on Aristotle's Terms," p. 178, calls this the traditional interpretation of Aristotle, where 'is' is taken as a mere copula connecting the two terms.

predicate consists of the most specific determinant.<sup>34</sup> Furthermore, in any statement of *tertium adiacens* of being *per se*, the existence claim follows from the predication of the determinant: S is (say) a dog; therefore S is.<sup>35</sup> These factors offer some explanation why Aristotle calls 'is' third in a statement of *tertium adiacens*. However calling it the third does not rule out 'is' from being predicated in its own right of the subject.

Likewise 16b19-25 does not show that Aristotle denies 'is' to be predicated in its own right. So as not to beg any questions, I quote the revised Oxford translation:

When uttered just by itself a verb is a name and signifies something—the speaker arrests his thought and the hearer pauses—but it does not yet signify whether it is or not. For not even<sup>36</sup> 'to be' or 'not to be' is a sign of the actual thing [*πραγμα*] (nor if you say simply 'that which is'); for by itself it is nothing, but it additionally signifies some combination, which cannot be thought of without the components. [16b26-16b28]

Aristotle says that a verb taken by itself is a name and signifies something, but not that [something] is. That is, it does not make an assertion of existence outside of a statement. For (if we ignore the implicit subject provided by the verb, as Aristotle seems to) the verb by itself has no subject provided about which to assert. Aristotle makes a similar point about the name at 16b28-30.

Aristotle then says that this point holds “even” for the verb ‘be’: ‘is’ by itself does not make an assertion. Likewise the nominal “that which is” needs a verb for completion. However, some manuscripts do not read “even” (the ‘δε’ of ‘οὐδε’).<sup>37</sup> Accordingly we get various options. 1) Keeping “even”, ‘be’ remains the paradigm and Aristotle intends to speak of all verbs. We might see here a whiff of Parmenides, who saw ‘Is’ as the cardinal case. This reading suits the aspect theory the best. Not only does ‘is’ function like other verbs, but other verbs function like ‘is’, so as to make an

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<sup>34</sup> Aristotle makes similar remarks about definitions and *differentiae*: 21a15-7; *Metaphysics* VII.12.

<sup>35</sup> Aristotle endorses this reasoning and rules out the invalid cases as instances of the fallacy of *secundum quid ad simpliciter* as I discuss in Chapter Eight.

<sup>36</sup> On “not even”, textual variants, and this passage in general, cf. Hermann Weidemann, *Aristoteles Peri Hermenias*, p. 180; “Aristoteles über das isolierte Aussagenwort,” pp. 245-7.

<sup>37</sup> This is Porphyry’s reading, noted by Ammonius, in *De Int.* 56,14-7. But then Porphyry goes on to read ‘τοῦ’ for “τὸ”, so as to get “For it is not a sign of the being or not being of the actual thing.” Because of the variant readings and obscure brevity of the text, there have arisen many interpretations. See Hans Wagner, “Aristoteles, *De Interpretatione* 3 16b19-25,” pp. 105-11, for a survey.

assertion of real existence, as the rendering of ‘walks’ into ‘is walking’ suggests.

Aristotle continues by saying that ‘is’ taken by itself “is not a sign of the actual thing (*πρᾶγμα*)” but is nothing. a) Many commentators take “actual thing” here to mean something like ‘fact’ or ‘state of affairs’.<sup>38</sup> Then Aristotle is asserting merely that any verb in isolation does not state a fact. ‘Is’ “additionally signifies” some combination of name and verb, in addition to signifying existence at the present time. Still, until at least a name is provided, the verb is nothing, in the sense of making no statement.

However, b) if “actual thing” be taken to stand for a real object,<sup>39</sup> i) on one interpretation, Aristotle seems to be asserting that ‘is’ does not signify an object, in contrast to other verbs, like ‘walks’, which do.<sup>40</sup> Even this reading does not refute the aspect theory: unlike (most) other verbs, ‘is’ does not signify an item in the categories. For Aristotle then it signifies nothing. So too he does not deny that terms like ‘is’ (or ‘existent’) are predicated, but excludes them from syllogistic proof. [*An. Pr.* 43a36-9; 43b36-8; 44b20-4]<sup>41</sup> Still, once again, like other verbs, ‘is’ “additionally signifies” the combination of the simple components into a statement, sc., as well as real presence.

On some other interpretations on reading (1), ‘is’, like any other verb, does not signify “an actual thing”. ii) Rather, as Aristotle said that the *thought* of a speaker stops at hearing a verb by itself, no such verb signifies “an actual thing”, but only a thought. Likewise, even a name like ‘goat-stag’ does this. To connect a thought to reality requires combination into a complete sentence in context.<sup>42</sup> iii) A variant of this interpretation sometimes takes ‘is’ in the veridical sense, and locates truth in the mind.<sup>43</sup>

iv) Yet another version of this interpretation has Aristotle saying that verbs, *unlike* names, do not signify actual things, although signifying “something” sc., in the mind.<sup>44</sup> The point would be that Aristotle has verbs, i.e., things in predicate position (in his protocol language), signify items whose existence depends upon the existence of a (individual) substance.

<sup>38</sup> E.g., J. L. Ackrill, *Aristotle's Categories and De Interpretatione*, p.122; cf. Anonymous, in *De Int.* 10,15.

<sup>39</sup> Ammonius, in *De Int.* 56,23-4.

<sup>40</sup> Wolfram Ax, “Zum isolierte *ῥῆμα*,” p. 276.

<sup>41</sup> Although he does sometimes use ‘be’ as a term, e.g., *Prior Analytics* I.33 & 38.

<sup>42</sup> Albert Zimmermann, “Thomas von Aquin über die Bedeutung der Kopula.” Perhaps Ammonius, in *De Int.* 56,28-57,14. Cf. Hermann Weidemann, “Aristoteles über das isolierte Aussagenwort,” pp. 242-6.

<sup>43</sup> E.g., Hans Wagner, “Aristoteles, *De Interpretatione* 3,” pp. 112-4; Charles Kahn, “On the Terminology for Copula and Existence,” p. 144.

<sup>44</sup> Hermann Weidemann, “Aristoteles über das isolierte Aussagenwort,” pp. 246; 254.

For Aristotle says that a verb is always said of something else. [16b6-10] Further he says that a name taken by itself, even one like ‘goat-stag’, signifies something, although not “that it is”. [16a16-8; 17a11-2]

However, all of these interpretations (ii-iv) have problems. Aristotle uses both the present tense and the infinite form of the verb to signify items in the categories. [Cat. 4] Too at 16b23 he likens ‘be’ to the nominal ‘that which is’. It seems that Aristotle takes both names and verbs to signify objects *in re*. All these interpretations seem to import a lot of complexity from later Aristotelianism: giving Aristotle both existence *in intellectu* and existence *in re*, or distinguishing a verb said as verb, either in a statement or out of a statement, from a verb used as name. I find it hard to find all this complexity in the text. Aristotle does not stress a distinctive level of thought, as the Stoics do, and seems to use ‘signify’ as a relation to a real object. Still, on all these readings, Aristotle continues to mark off the use of ‘is’ asserting being *per se* from its use as asserting being *per accidens*, or, if you like, being *in intellectu*. The use of ‘is’ required by the aspect theory still has a place.

2) On the second option, deleting “even”, the passage appears to distinguish the case of ‘be’ from all other verbs.<sup>45</sup> For other verbs do more than “additionally signify” some combination: generally they signify items in the categories too. So unlike other verbs ‘is’ does not signify some object, nor does it have any function other than to connect the subject to some other predicate. As Weidemann notes, this seems to give ‘is’ a purely copulative function.<sup>46</sup>

However, most do not follow this interpretation (2a/b), even though it seems more congenial to modern logic, where existence is not a predicate. For it depends on a variant reading (deleting ‘even’). Above all, any interpretation of this passage seem to rule out statements of *secundum adiacens*, where ‘is’ supplies the predicate as well as connects the predicate to the subject. Even Ammonius, a founder of the copulative theory, does not take this interpretation, but instead takes ‘is’ as the paradigm for all verbs. [*in De Int.* 55,19-24]<sup>47</sup> We need a reading where ‘S is’ remains the fundamental form of the statement. Too, ‘additionally signify’ generally implies in Aristotle that another signification is lurking around.

Still, it has a point. As said above, ‘is’ does differ from (most) other verbs that Aristotle allows into statements.<sup>48</sup> For it does not signify an item

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<sup>45</sup> Wolfram Ax, “Zum isolierte *ῥῆμα*,” p. 276.

<sup>46</sup> In his review of Whitaker, p. 163.

<sup>47</sup> Ammonius, 57,29-30, does go on to parse ‘S is’ ‘S is existent (*ὄν*)’, by analogy with ‘S walks’ becoming ‘S is walking’, so as to get a copulative theory.

<sup>48</sup> ‘Becomes’, e.g., has many of the features of ‘is’.

in the categories. It does denote a real presence; I do not say ‘signify’. For, unlike Plato, Aristotle does not recognize being as a transcendent object. Accordingly only cautiously did he endorse a science of being *qua* being. Just as an accident cannot exist without a substance, nor a universal without an individual, so too real existence does not occur without something existing in a certain way.

In sum, Aristotle does not separate off ‘is’ from other verbs as a mere copula. On the contrary, Aristotle takes ‘is’ as the basic, paradigmatic form for the verb. Other verbs have a more determinate content than ‘is’ which merely denotes a real presence, of something unspecified, that can be determined further.

Still all this does not guarantee the consistency of the bipartite, name-verb analysis of a statement with this tripartite, subject-copula-predicate analysis that Aristotle seems to develop and that makes ‘is’ merely connect predicate to subject. But before considering this issue, let me sketch out the latter analysis further.

### *The Tripartite Analysis*

Predictably enough, Aristotle develops the tripartite analysis of the statement mostly in the *Prior Analytics* in the course of developing his syllogistic. He intends the syllogistic to be used in his theory of scientific demonstration, which will display the real natures and causes of things and cut up reality “at the joints”. Here the structure of object and attribute has great importance.

Aristotle defines ‘*πρότασις*’ (‘premise’ or ‘proposition’) in the same way that he has defined ‘declarative statement’ in *On Interpretation*: “a premise is an affirmative or negative statement (*λόγος*) of one thing [said] of another.” [24a16-7] However instead of analyzing a premise into name and verb, he uses a term analysis:

I call a term that into which a premise resolves, as in what is predicated and that of which it is predicated when ‘be’ or ‘not be’ is attached <or detached (*διαιρουμένου*)>. [24b16-8]<sup>49</sup>

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<sup>49</sup> Ross segregates ‘or detached’; other editors do not. This text has many difficulties. For a survey of them, see Robin Smith, comm., *Prior Analytics*, pp. 108-9. However, I disagree with him, p. 109, where he says that this text, “attached or detached,” is concerned with the appearance of ‘*ἐσπν*’ in a proposition and its place relative to the other words. Aristotle shows little concern for syntactical matters like word order elsewhere. Alexander, in *An. Pr.* 16,1-13, has the usual interpretation that Aristotle wants to indicate that ‘is’ or ‘is not’ must

Whatever else it says, this text clearly takes the tripartite statement as basic, and takes its subject ('S') and predicate ('P') as its terms, which he will then link up in various ways, via the copula 'is' (or 'belongs to'), to form syllogisms. [Alexander, *in An. Pr.* 14,28-9]

What does Aristotle mean by saying "when 'be' or 'not be' is attached <or detached (διαπουμένου)>"? A parallel passage may help: "I mean that, e.g., man signifies something, but not that [he] is or is not (but it will be an affirmation or denial if something were attached)." [16b28-30; cf. 16a14] Once more Aristotle says that a name becomes a statement when 'is' or 'is not' is added to it. On my view, the disputed piece of text, "or detached", is pleonastic but harmless. Negation can be described as a type of detachment or division. Plato had already used division as a method of dividing a group of items into two types, P and not-P. For the text under consideration, the attachment of 'be' yields 'is' in the proposition and hence the affirmation. Its detachment yields 'is not' and hence the denial. The appearance in the text of "not be" and "detached" just makes the same point twice.

I see another interpretation giving 'is not' a different role. All premises require the presence of 'is'. When 'is' is attached, as in the simple affirmation, it makes an assertion of existence. When 'is' is present in the statement but is not said of the subject, so as to make the assertion that the subject exists, it might be said that 'is' is detached from the subject. 'Is not' indicates this detachment. I.e., 'is' appears in a simple denial ('not (S is P)'), but here does not attach to the terms so as to make an existential claim ('there is an S-P'). However, Aristotle in his syllogistic is generally inclined to a "privative" reading of denials, where denials assert existence, like metathetic statements.<sup>50</sup>

This tripartite statement becomes the standard used by Aristotle in syllogistic. As Łukasiewicz remarks, Aristotle's syllogistic requires terms to be indifferently subject and predicate.<sup>51</sup> Although he may use other statement forms, he views them as reducible to the standard form in order to have statements consisting of terms that may be connected so as to reach a syllogistic conclusion. The standard Aristotelian statement consists of two

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be added to the terms while not being a term. Also see Jonathan Barnes, "Grammar on Aristotle's Terms," p. 188, n. 48.

<sup>50</sup> See Chapter Seven.

<sup>51</sup> Jan Łukasiewicz, *Aristotle's Syllogistic*, p. 7. Alan Code, "Aristotle: Essence and Accident," p. 431, says that in Aristotle's early theory an item in any category can be the subject; but in the late theory, in the *Metaphysics*, only substances, in a primary sense. This view would rule out the syllogistic as part of Aristotle's mature theory. I shall argue that Aristotle keeps the same theory of predication and that even quite late he allows paronyms of the other categories to be the subject, so long as they are taken substantively.

categorematic terms or expressions related, affirmatively or negatively, by a copula, where the subject may be quantified by ‘some’ or ‘no’ or every’. The quantified statements provide the standard material for the syllogistic: ‘every dog is (an) animal’; ‘some stone is white’; ‘no stone is an animal’; ‘some stone is not white’. Aristotle also recognizes singular and indefinite simple statements and various compound statements like the disjunctive, conditional, and the reduplicative.

In all of these types of premises, Aristotle allows for conversion of subject and predicate. Thus ‘every dog is an animal’ converts to ‘some animal is a dog’. Here the verb seems to be ‘is’, as it “additionally signifies” time: consider ‘some dog will be white’. As the two terms (‘S’ and ‘P’) connected by ‘is’ can be subject and predicate indifferently and name items in the categories, they both seem to be names. Here then we have a ‘name-verb-name’ analysis. But this appears to conflict with the bipartite analysis.

### *The Relation Between the Bipartite and the Tripartite Analyses*

A common problem for interpreters of Aristotle, regardless of their theory of predication, consists in relating the analyses of the statement given by Aristotle: the bipartite, name-verb analysis and the tripartite, subject-copula-predicate analysis. The bipartite analysis has little use for predicate complements. Aristotle does not consider much there examples like ‘Socrates is wise’ or ‘Socrates is an animal’, nor, even less, those like ‘Socrates loves Xanthippe’. The tripartite analysis has little use for verbs having no predicate complement like a statement of *secundum adiacens* or one like ‘Socrates walks’. Indeed, even in *Metaphysics* V.7, Aristotle recommends eliminating them, to make, e.g., ‘Socrates walks’ into ‘Socrates is walking’ so that the tripartite structure may apply explicitly.

Aristotle appears to contradict himself in trying to present a tripartite analysis together with his name-verb analysis. For he says that the predicate term is the “verb”. [20a31-2; 20b1-2; 16a13-5] But surely a term like ‘white’ or ‘animal’ does not additionally signify time. If we interpret Aristotle charitably and allow ‘is white’ to be a verb, that seemingly contradicts Aristotle’s claim that no part of a verb is significative by itself. [16b6-7] For many this passages illustrates that Aristotle has an inconsistent theory of predication, or at best changes or badly states his theory.

So Aristotle seems to have two incompatible analyses of the statement: the bipartite, consisting of a name and a verb consignifying time; a tripartite, consisting of two atemporal names connected by a temporal copula.

Indeed, Aristotle seems to have many problems here.<sup>52</sup> It is tempting to suppose them insoluble, and perhaps caused by his moving from the name-verb analysis as given by Plato in the *Sophist* [262a4-7] to his own term analysis developed for the syllogistic.<sup>53</sup> It might appear that the aspect theory describes the former, and the copulative theory the latter.<sup>54</sup>

Yet there are signs that Aristotle himself views these two analyses to be consistent if not unified.<sup>55</sup> In *On Interpretation* 10 where Aristotle introduces the tripartite analysis after having given the bipartite one, he again makes a remark about the equivalence of a statement like '(a man) walks' with a statement containing 'is', presumably '(a man) is walking'. As in *Metaphysics* V.7, Aristotle says, "In those cases where 'is' does not apply, as with 'to heal' and 'to walk', those that are posited thus do the same as if 'is' is connected." [20a3-5] Aristotle proceeds to present a square of opposition for 'every man heals'. The point is that he does not here use the reduction to 'every man is healing' and apply the tripartite analysis directly. Instead he appeals to the reduction to motivate a square of opposition along the lines of 'every man is just', where the example is 'every man heals' etc. Thus Aristotle retains concepts applying to the name-verb theory when he uses the tripartite analysis. He switches back and forth between the two freely. He does so again when he uses the name-verb structure in making statements like 'whiteness is a color' or 'walking is motion'. [*Top.* 109b3-4]

So Aristotle seems to think that he has a single, consistent theory. But can we be assured that he does?

One clue may lie in a conclusion that I reached above: for Aristotle, names and verbs are not grammatical entities but are signs of subjects and their attributes. Even in his general discussion of being *per se* and being *per accidens* Aristotle resolves a statement into a relation between an object and its attributes (usually one). Thus Aristotle resolves even cases like 'the

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<sup>52</sup> J. L. Ackrill, *Aristotle's Categories and De Interpretatione*, p. 118-20 gives a fair selection of them.

<sup>53</sup> The *locus classicus* for this view is Peter Geach, *Logic Matters*, pp. 50-3; 290-1. Geach generally likes the bipartite theory, with a saturated name and an unsaturated verb, but considers the "two-name" tripartite theory "one of the worst disasters in the history of logic." See too Jonathan Barnes, "Grammar on Aristotle's Terms," pp. 180-1.

<sup>54</sup> This movement does not mean that Aristotle changed theories. I agree with Charlotte Witt, "The Evolution of Developmental Interpretations of Aristotle," p. 82, that the difference between static and developmental determinists largely disappears if we consider Aristotle's views to have developed internally. Aristotle is driven by problems and not doctrines, and these have an internal dynamic of their own. Cf. Jaakko Hintikka, "On the Development of Aristotle's Ideas of Scientific Method and the Structure of Science," pp. 83-4.

<sup>55</sup> Accordingly Fred Sommers, *The Logic of Natural Language*, p. 26, notes that Geach has no evidence for claiming that Aristotle makes a radical change of doctrine and the "two-name" theory is present just as much in *On Interpretation*.



just is musical' into the relation of two accidental attributes to one object. [*Metaph.* V.7] When the sentence refers to two objects, Aristotle resolves it into two statements. [*Int.* 8] In general then, Aristotle requires a single statement to concern the relation of one attribute (or more attributes, if they have the right interrelations [*Int.* 11]) to a single object.

In some of his doctrines, such as that on the statement, Aristotle shows a remarkable indifference towards which grammatical structures these signs may have in ordinary language. Still, in his protocol language Aristotle insists strongly on having the statement, or proposition, in a certain format, one isomorphic with the mental language. In the syllogistic a particular grammatical, syntactic form of the statement is required for the inference to be valid, as the inference rules are stated syntactically with respect to the minor, middle, and major terms. These terms have to be able to serve indifferently as subject and predicate, and be related in a relation of predication that Aristotle indicates by 'ἐστίν' or 'ὑπάρχει'. In fact Aristotle shows his awareness of needing a certain grammatical form for the rules of the syllogistic to apply, and devotes some effort to showing how to parse sentences into that form. [*An. Pr.* I.34-45] But now it appears that Aristotle's ideal structure of predication must have the tripartite format.

The problem is that he seems to have two formats, the bipartite and the tripartite, each with advantages. The bipartite analysis has the advantage that it reflects Greek grammatical structure as well as following Plato's analysis. For 'Socrates walks' predicates 'walks' of 'Socrates', and for Plato signifies Socrates' participation in Walking. On the other hand, the tripartite analysis more closely reflects the structure suggested by Aristotle's analysis of the statement and required by this syllogistic: 'S is P' signifies the relation of belonging, of an attribute P to the subject S. This structure takes on great importance for Aristotle's ontology and thus for his demonstrative science.

Perhaps then Aristotle uses the bipartite analysis on an endoxic level, and the tripartite analysis on a philosophical level. The bipartite analysis would then reflect past Greek linguistic and philosophical practice, Aristotle's *endoxa*, whereas Aristotle arrives at the tripartite analysis as a result of his own philosophical conclusions. Yet Aristotle does not view the two as incommensurate: for he switches between them readily in his own technical discussions. Rather the bipartite and the tripartite analyses seem to serve for him as different formulations of the same theory, useful for different purposes. Aristotle does not give up the aspect theory of predication in his syllogistic and theory of demonstrative science, although he does give up using the bipartite analysis there. Note too that Aristotle tends to use the tripartite analysis mainly in dealing with quantified statements: the particular and universal ones of the syllogistic. These statements have substantive

predicate complements that can easily become subjects by conversion. Many sentences do not take well to this treatment without radical parsing.

On this interpretation, the tripartite analysis would not replace the element of a verb with the two elements, copula and predicate. Instead it would parse a verb as (grammatical) copula and predicate, that is, as 'is' plus qualifier. To talk of 'copula' here is misleading: for on the tripartite analysis too every statement is a statement of existence or being, where that being is signified by 'is' and where that being may be qualified further by the predicate, which functions, as it were, adverbially.

Does this interpretation work? Let us see if it resolves some of the problems of the consistency of the bipartite and the tripartite analyses.

One such problem consists in the verb's disappearance in the tripartite analysis. For the predicate term, like 'an animal' in 'every dog is an animal', cannot be a verb, as it does not additionally signify time. But 'is white' cannot be a verb either, as Aristotle has said that no part of a verb is by itself a whole word. So the verb appears to have vanished.

The aspect theory of predication offers a nice resolution of this problem. For, in a proposition like 'Socrates is white', neither 'white' nor 'is white' is the verb. Rather, 'is' is the verb, and 'white' a further specification of the verb.<sup>56</sup> This view implies that Aristotle takes predicate complements adverbially. In this way, 'Socrates is white' would have a structure similar to 'Socrates is well' or 'Socrates shouts loudly'. In this way simple statements and modal statements would have similar structures, as Aristotle himself may imply. [21b26-32]<sup>57</sup>

One objection to this solution is that, as I have noted, Aristotle does seem to call 'not-just' and 'white', when predicated, "verbs". Yet those passages are quite sketchy, and that labeling is not too clearly supported. The first one depends on Aristotle's speaking of indefinite names and verbs, and then giving an example of a name and a verb in succession, instead of giving two examples of a name. But the latter supposition fits the sense better, as Aristotle at 20a31-5 is making the same point as he does at 16b28-30. In the earlier passage, his point is that a name turns into a statement only when 'is' or 'is not' is attached to it. Now he makes the same claim for indefinite names and verbs. However he proceeds to give an example only for the indefinite name, and so two examples of indefinite names would be appropriate. In fact, to make the corresponding point for the in-

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<sup>56</sup> Cf. Jonathan Barnes, "Grammar on Aristotle's Terms," p. 192: "... 'is' is a verb-forming name on names."

<sup>57</sup> Aristotle does say, 21b24-5, "that 'is' is attached to 'just' or to 'not-just'", but seems to be talking only about how to construct statements. Cf. 19b21-2. and 24b16-8, discussed in the previous section.

definite verb, he would have to say that it by itself does not make a statement, but only when a name is attached. But he never discusses this issue. Indeed, if he did, he would then have to address the issue of a verb in Greek containing a name (pronoun) implicitly, which he never does. So this first passage is not decisive.

The second passage presents more difficulty. Literally, it reads:

Now names and verbs, when interchanged, signify the same, as in '[there] is a white man'— '[there] is a man white' (ἔστι λευκὸς ἄνθρωπος— ἔστιν ἄνθρωπος λευκός) [20b1-2]

There is some difficulty about how to translate the examples. Ackrill has 'a man is white'—'white is a man'. But that translation suggests conversion. But Aristotle does not use here his normal word for conversion. Rather, as Ackrill's own translation of 'transposed' suggests, Aristotle is concerned with a change in the word order. So I opt for my translations.<sup>58</sup> '[There] is a man white' might appear not even to qualify as a grammatical translation. But Aristotle's point in the passage concerns word order, and this point does not translate well, given the great difference for rules of word order in English and Greek. We do have such constructions sometimes in English: 'Mark Twain describes "the house beautiful" in *Life on the Mississippi*.'

But there still remains the major difficulty. As 'white' and 'man' are alone interchanged, and as 'man' has to be a name, it appears that 'white' is a verb. But that would conflict with the bipartite interpretation.<sup>59</sup>

Aristotle may be inconsistent here. But the aspect interpretation seems to give him a decent reply. The original sentence is ambiguous: 'is white man' might mean 1) 'there is a white man', where the existence of a complex subject is being asserted, or 2) 'a man is white', where 'white' is predicated of 'man'. To disambiguate the sentence, Aristotle says that names and verbs are interchanged when 'man' and 'white' are interchanged. At the least this remark means that 'white' has a verbal function.

<sup>58</sup> Hermann Weidemann, *Aristoteles Peri Hermenias*, p. 331, agrees that 20b1-12 concerns not conversion but changing word order. Cf. Ammonius, in *De Int.* 191,21-192,1; 193,27-194,20

Akrill himself is forced at times into such constructions. Thus at 21b2-3 he opts for "the negation of 'to be a white man' is 'not to be a white man'..." in order to keep his translation in parallel for these statements when modalities are attached. I have already noted similar constructions at *Prior Analytics* I.46 and their significance in supporting the aspect theory. Also note that Ackrill's translation, 'white is a man', runs counter to Aristotle doctrine of unnatural predication which I shall discuss below. However I shall provide some vindication for Ackrill's translation below.

<sup>59</sup> Actually, it conflicts with other interpretations too, including the copulative. Moses Matthen, "Greek Ontology and the 'is' of Truth," p. 122, n.15, notes the problem with 'white' being a verb, if a verb must consignify time.

That would rule out the first reading of 'is white man'. For 'white' would then not form part of the subject. By saying that 'white' is the verb, Aristotle would be speaking imprecisely: for it is not the whole verb, but a verbal specifier. Above I remarked on the adverbial (ad-verbial!) features of predicate complements on the aspect theory. When Aristotle was writing, the technical vocabulary for grammar was not too copious or widespread, and so perhaps he used 'verb' loosely here. Note that *ῥῆμα* need not mean 'verb' in the more modern grammatical sense anyway. Indeed De Rijk goes so far as to claim that it means 'attribute' and that only one type of *ῥῆμα* additionally signifies time.<sup>60</sup> We need not go that far, but could take *ῥῆμα* as an attributive that signifies time. In particular, as I shall discuss in Chapters Five and Eight, 'just' and 'white' are not "names" strictly for Aristotle: they do not name items in the categories, but instead are terms derived from names that do: 'justice'; 'whiteness'. But the subject is not whiteness nor justice; rather it is something having whiteness or justice.<sup>61</sup> So, strictly, 'S is just' should be read as 'S exists as (something) having justice'. Such derivative, paronymous terms apply attributively to names as modifiers. Aristotle seems to view modifiers as containing implicit predications, as we have seen in Chapter Two with being *per accidens*.

Thus Aristotle is making a point about the sequence of words in the statement, and is claiming that the sentence '[there] is a white man' and the sentence '[there] is a man white' express the same statement: that a man is white. Aristotle calls 'white' a "verb" here, in the sense of serving a verbal (we might say an adjectival) function, with a predication and an 'is' implicit and understood. Likewise he seems to take 'white' as a "verb" at 16a15 since it needs attachment to a name.<sup>62</sup>

In fact, Aristotle says in the same passage also that in a statement like 'Socrates is just' or 'Socrates is not-just', 'is' will be attached to 'just' or to 'not-just'. [19b24-6] The phrasing suggests that Aristotle, in enumerating the types of statements of *tertium adiacens*, takes the predicate to be 'is P' and not merely 'P'.

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<sup>60</sup> L. M. De Rijk, "On Aristotle's Semantics in *De Interpretatione*," p. 125. Ammonius, in *De Int.* 53,5-8, holds that Aristotle has various senses of 'verb' including words like 'white' when put into predicate position. So too Walter Cavini, "La negazione di frase nella logica Greca," p. 22, says that for Aristotle a universal taken indefinitely functions like a predicate.

<sup>61</sup> Cf. P. F. Strawson, *Individuals*, p. 146: "Let us say...that the expression 'is wise' serves to *introduce* the quality, wisdom, into the remark." So too Alan Code, "On the Origins of Some Aristotelian Theses about Predication," p. 108: "Aristotle thinks that Plato's account of the items predicable in common as a separable τὸδε τι rather than a τοιοῦσδε leads to the Third Man Argument."

<sup>62</sup> Hans Wagner, "Aristoteles, *De Interpretatione* 3," p. 113.

This reading becomes more plausible if we recall that Aristotle discusses the opposition of ‘man is white’ (or: ‘here is a white man’) and ‘man is not white’ (τὸ εἶναι λευκὸν ἄνθρωπον—τὸ εἶναι μὴ λευκὸν ἄνθρωπον) elsewhere. [21b2-3] He calls ‘man’ and ‘white’ the objects that are the subjects (“τὰ ὑποκείμενα πράγματα”), and says that here ‘is’ and ‘is not’ are “additions” (“προσθέσεις”). [21b26-8] This passage has its problems too, but at least here Aristotle is not calling ‘white’ a “verb”. On the contrary, by calling it a subject and an object, he seems more inclined to take it as a name. (‘White’ can be a subject if taken concretely to mean ‘the thing that is white’ as I shall discuss in Chapter Five. [Cf. *Top.* 109a10-26])

This interpretation of this passage may not save Aristotle’s logical virtue completely, but does leave the main lines of his teaching intact. The main flaw lies in Aristotle’s calling ‘white’ at one place a verb instead of an adverbial inflection or verbal complement. But, in comparison with the various follies that Aristotle comes to be charged with on many other interpretations, that turns out not to be too badly.<sup>63</sup>

Aristotle’s metaphysics of being leads him towards a two-term approach. As we have seen, in his lexicon, he distinguishes being *per accidens* and *per se* in terms of which substances are being combined with which sorts of attributes. Ultimately, he says, every such combination, even that of two accidents, presupposes an underlying substance and its existence. On the other hand, for any substance to have being, it exists such that its existence can be specified further, in one of the ten ways of the categories. So a simple statement like ‘S is’ can be further specified, such that, for some P, where ‘P’ is a term signifying an item in a category, ‘S is P’ is true. For Aristotle, a statement of *tertium adiacens* requires two items, a substance and an attribute (or three items, if the combination involves two accidents, and so presupposes a third item, as substratum and substance, as in ‘the white is musical’). An affirmative one thus makes an assertion of the existence of a certain complex. That Aristotle uses examples like ‘(there) is a just man’ supports this view, as the statement can be said indifferently as asserting that the complex, ‘just man’, exists, or that ‘a man is (exists as) just’, i.e., as a thing having justice.<sup>64</sup> On the name-verb analysis,

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<sup>63</sup> Cf. Bertrand Russell, *Principles of Mathematics*, p. 50: “The verb, when used as a verb, embodies the unity of the proposition, and is thus distinguishable from the verb considered as a term...” Also cf. W. V. O. Quine, *Methods of Logic*, p. 220: “‘is white’ is a verb, no part of which is significative.” Quine has a different ontology though *re* paronymy. Cf. Hermann Weidemann, *Aristoteles Peri Hermenias*, p. 176.

<sup>64</sup> Walter Cavini, “La negazione di frase nella logica Greca,” pp. 14-5; 22, notes the unusual word order that Aristotle uses in his treatment of statements in *On Interpretation*, and is inclined to read them existentially, so as to have the form ‘there is an S [-P]’. Likewise Ross, Colli, and Mignucci translate 52b28-31 as a grammatical predicate: ‘there is not a white log’

it would be natural for Aristotle to focus on the two items being combined. Even in a statement of *secundum adiacens*, two items are being combined on Aristotle's view, as he has said that being said *per se* needs to be filled out by a categorical term. The two items being combined in 'S is' are not 'S' and 'is', or existence, but rather S and one of its categorical attributes: for Socrates to be is for him to be a man; for whiteness to be is for whiteness to be a quality. But then, this further specification results in a statement of *tertium adiacens*. 'Is' becomes additionally predicated, while the main predication concerns the combination, e.g., of 'man' and 'just'.

In this way, the bipartite and the tripartite analyses have a lot in common in their assertion of 'being': the former emphasizes ordinary Greek usage and the Platonist legacy; the latter Aristotle's own analysis, as reflected in the syllogistic. In both cases the statement asserts the existence of the subject ('S') with further specification ('P'). 'S' and 'P' both signify items in the categories. Aristotle gives primary substances a special status. Strictly they are the fundamental subjects presupposed by all other subjects. [*Metaph.* 1028a25-31; *Cat.* 2b5-6] As such, they cannot serve, strictly, as predicates. Only the secondary substances and accidents can do that. When 'white' becomes the subject term, strictly it is a primary substance that is white that is the subject. In the next chapter, we shall see this claim borne out in Aristotle's doctrine of unnatural predication.

In sum, I propose to take the bipartite and tripartite analyses as different ways of expressing the aspect theory grammatically. We have already seen in his very descriptions of names, verbs, and meanings of 'be' that Aristotle has a logical focus, and ignores the grammatical phenomena. Further, he switches back and forth between the bipartite and the tripartite formats without much concern, depending on his present interests. So too we have seen that we can construe how Aristotle expresses statements as either 'S is P' or as 'there is an S-P'.<sup>65</sup> As for Aristotle's seeming to call 'white' a verb, all interpretations have trouble here, as this usage conflicts with his defini-

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etc. In the same way L. M. De Rijk, "On Aristotle's Semantics in *De Interpretatione*," p.131; "The Anatomy of the Proposition," pp. 43-42; 60 n. 60, combines subject and predicate into a complex and has 'is' assert that the complex obtains. Moses Matthen, "Greek Ontology and the 'Is' of Truth," pp. 125-31, has a similar view.

On the opposing, copulative side, Hermann Weidemann, *Aristoteles Peri Hermenias*, p. 334, takes 'ἔστι δίκαιος ἄνθρωπος' as 'man is just' and not 'there is a just man'. See p. 390 where he discusses the complex predicate approach.

Cf. Günther Patzig, *Aristotle's Theory of the Syllogism*, p. 11: "...in the normal formulation 'A is B', both the linked terms are in the nominative case so that to distinguish subject from predicate we depend upon the conventional order of the terms in the proposition, a convention which, in Greek as in English, is sometimes violated." As Aristotle violates the conventions regularly, his meaning become obscure.

<sup>65</sup> Ackrill's translation of 'μετατίθεμενα' as "transposed" may not be so far off the mark.

tion of ‘verb’. We might best construe this passage as saying that Aristotle wishes to indicate the ‘white’ should be taken “ad-verbially”, to belong to the verbal part of the statement.<sup>66</sup> I shall return to this issue when I discuss conversion in Chapter Eight.

The verb, when used as a verb, embodies the unity of the proposition, and is thus distinguishable from the verb considered as a term...<sup>67</sup>

### *The ‘ὑπάρχει Construction*

On both the bipartite and the tripartite analyses Aristotle reduces all other verbs to an assertion of existence plus perhaps an additional specification made adverbially. On the name-verb analysis, Aristotle stresses the primacy of ‘be’ over other verbs, in order to make all assertions assertion of being. On the subject-copula-predicate analysis, each simple, canonical statement has two terms. Aristotle’s most obvious motive for moving away from the name-verb analysis comes from his wanting to have a term logic. On the other hand, he has a strong motive for the bipartite analysis in his ontology of substance and attribute. So he uses both ways of expressing and analyzing predications. On both, he wishes to reduce all verbs to an assertion of existence plus a predicate complement.

However in his syllogistic, where the tripartite analysis prevails, after reducing ‘S P’s’ to ‘S is P’, Aristotle seems to prefer ‘P belongs to S’ and ‘P is predicated of S’ to saying ‘S is P’.<sup>68</sup> So let me turn to this ‘belongs to’ (‘ὑπάρχει’) construction, and see how it fits with the aspect theory.

The ‘ὑπάρχει’ construction may have Platonist foundations. For it looks like the converse of ‘participates’ (‘μετέχει’): if Whiteness belongs to Socrates, then Socrates participates in Whiteness.<sup>69</sup> Aristotle may have been

<sup>66</sup> Hermann Weidemann, *Aristoteles Peri Hermenias*, pp. 155-7, claims that Aristotle uses ‘verb’ often [16a15; 20b2; 20a32] just to designate the predicate complement, and often omits ‘is’.

Shukri Ahed, *Aristotelian Logic and the Arabic Language in Alfarabi*, p. 152, reports that Al-Farabi says that some Arabic grammarians considered derivative names verbs.

<sup>67</sup> Bertrand Russell, *Principles of Mathematics*, p. 50.

<sup>68</sup> In the *Prior Analytics* ‘ὑπάρχει τῷ’ and ‘κατηγορεῖσθαι κατά’ are used interchangeably, e.g., at 25b37-26a4. W. D. Ross, *Aristotle’s Prior and Posterior Analytics*, p. 293, notes that sometimes Aristotle uses instead ‘ὑπάρχει πρὶ τῶν A’. Wolfgang Wieland, “Die Aristotelische Theorie der Notwendigkeitsschlüsse,” p. 56, accepts their equivalence in the categorical but not in the modal syllogistic.

<sup>69</sup> Thus Aristotle, *Topics* 109a19-22, speaks of whiteness or justice belonging simply or in a respect and in part to man. Cf. Michael Frede, *Prädikation und Existenzaussage*, pp. 54-5.

inclined to use it to stress the primacy of primary substances as the ultimate subjects: the universals are said and have being with reference to them, but not conversely.<sup>70</sup>

It may be objected that Aristotle has eliminated 'is' from propositions in his syllogistic and thus has abandoned the aspect theory. For he regularly uses the 'ὑπάρχει' construction, which seems to have a copulative function and not to have an existential function. In order to forestall this objection, I shall consider the 'ὑπάρχει' construction now.<sup>71</sup>

The 'ὑπάρχει' construction appears to be almost as awkward in Greek as it is in English.<sup>72</sup> On this construction, 'every man is animal' is rendered as 'animal belongs to every man', where there are two terms, the subject term, 'every man', the predicate term, 'animal', and the copula, 'belongs to'. Likewise 'Socrates is a man' is rendered as 'man belongs to Socrates'. A negative statement like 'some animal is not a dog' is rendered as 'dog does not belong to some animal'. Aristotle routinely uses the 'ὑπάρχει' construction in his syllogistic, although not too much elsewhere.<sup>73</sup>

But why does Aristotle bother to switch to this awkward locution? Off-hand, the 'ὑπάρχει' construction looks like a way to emphasize that the two terms of the statement are being copulated, in a relation of predication without any existence condition. This construal would fit the copulative interpretation which takes the tripartite analysis to deny that 'is' continues to be predicated in a statement of *tertium adiacens*, although it is "additionally predicated", not in my sense, but in the sense of serving as copula only. The usual translation of 'belongs to' appears to support this interpretation.

However, in ancient Greek, 'ὑπάρχει' has other meanings besides 'belongs to'. Its literal sense is 'be there at the beginning'. Hence 'ὑπάρχει' came to mean 'really exist', and Aristotle uses it in this sense. [*Cael.* 297b22; *Metaph.* 1041b4; Alexander, in *An. Pr.* 366,21] Too, it does mean 'belong to', in the sense of 'subsist' or in the more prosaic sense of

<sup>70</sup> Philoponus, in *Cat.* 19,11-2, says that the universal needs particulars in order to be predicated of something. Cf. Alexander, *Quaestiones* 1.11A.

<sup>71</sup> Walter Cavini, "La negazione di frase nella logica Greca," p. 44, notes that Aristotle's use of Greek is contrary to ordinary usage. Aristotle does have other (often, somewhat related) uses of 'ὑπάρχει' besides this technical use. E.g., at *Metaphysics* 1005a22-3, when he says that the axioms "belong to" a single science. Cf. Alan Code, "Metaphysics and Logic," who claims, p. 131, that to say that the principle of non-contradiction "belongs" *per se* to all things that are [*Metaph.* IV.3] seems to use 'belongs' ambiguously.

<sup>72</sup> Günther Patzig, *Aristotle's Theory of the Syllogism*, p. 11.

<sup>73</sup> Robin Smith, *Prior Analytics*, p. 108. Cf. Hermann Weidemann, *Aristoteles Peri Hermenias*, p. 174.



‘ownership’.<sup>74</sup> In all these senses ‘ὑπάρχει’ does not serve merely to couple, but also to make a claim of existence. So we should not conclude that by his use of ‘ὑπάρχει’ Aristotle is signaling that he intends only the relation of copulation.<sup>75</sup> We should keep in mind these other meanings of ‘ὑπάρχει’, based on the root sense of ‘begin’ or ‘be already in existence’. In Aristotle, the modern translations of ‘ὑπάρχει’ generally switch back and forth between ‘belongs to’ and ‘exists’ or ‘subsists’. I do not insist that every word has only one meaning. Yet we might seek to understand ‘ὑπάρχει’ in a way having more of a single, focal meaning.

Thus I propose another reading. First, note that Aristotle describes ‘ὑπάρχει’ in the same way that he has described ‘ἔστιν’:

That this belongs to that and that this is true of that must be taken in as many ways as the predications (κατηγορίαι) are divided, and these either in a respect or simply, and again either simply or in combination. [*An. Pr.* 49a6-9]

Aristotle says that ‘belongs to’ is not said in a single way:

Rather, ‘belongs to’ also must signify in as many ways as ‘be’ (εἶναι) and ‘true to say [that] it [is] this’ are said. [48b2-4]

So, in almost exactly the same phrasing that he used in distinguishing significations of ‘is’ *per se* in *Metaphysics* V.7, Aristotle distinguishes significations of ‘belongs to’. It is said in as many ways as (the figures of) predication are divided, sc., the categories. [Alexander, in *An. Pr.* 366,24-33]

Some, as we have seen in discussing *Metaphysics* V.7, might take this claim about ‘belongs to’ to show that Aristotle recognizes more than one logical type of predication relation. However, Aristotle’s point here concerns how to render expressions signifying items in the categories into terms for syllogisms. E.g., ‘health belongs to no sickness’ turns into ‘no sickness is health’, but ‘health belongs to some dog’ turns into ‘some dog is healthy’. Aristotle is concerned with how to turn the abstract names that signify, strictly speaking, items in the accidental categories into concrete names that can be used as terms.<sup>76</sup> He suggests using an inflection of a

<sup>74</sup> Liddell, Scott, Jones, *A Greek Lexicon*, s.v. ‘ὑπάρχω’; A. A. Long, “Aristotle’s Legacy of Stoic Ethics,” p. 89; Jonathan Barnes, “Grammar on Aristotle’s Terms,” pp. 184 n. 27; 186 n. 37. Cf. Alexander, in *An. Pr.* 26,7-10, who takes it as “belonging now”.

<sup>75</sup> Cf. *On Interpretation* 16b15; 17a23-4 for instances where Aristotle uses ‘ὑπάρχει’ to indicate the predication and something more.

<sup>76</sup> Alexander, in *An. Pr.* 360, 5-6: “So when the predicate is predicated in direct inflection then it is predicated strictly of the subject.” In Chapter Eight I shall argue that Aristotle requires substantive terms for conversion even when only one of the terms signifies a substance.

name (a non-nominative case) or some other grammatical device to turn the abstract name into a term. [*An. Pr.* 48b39-49a5] In effect, he is continuing the same point made in *Prior Analytics* I.34, where the grammatical form of the term has to be changed in the premise. Once this is done, we are back to a single predication relation with many different grammatical and logical types of predicate complements.<sup>77</sup>

Indeed, Aristotle explicitly equates 'is' and 'belongs to' as converses when he discusses the "conversion" of 'P belongs to S'. [*Top.* 109a10-26] When the "belonging" relation concerns a definition or *proprium* or genus, he says that the conversion is straightforward: P belongs to S iff S is P. But when P is an accident of S, then P may belong to S in whole or in part. Then the conversion may be particular or general: to 'every S is P' or to 'some S is P'.<sup>78</sup> Here what belongs belongs indefinitely. Aristotle is noting the ambiguity. Once again, in these conversions, what belongs to the subject is expressed by an abstract name, while what the subject is is expressed by the correlative concrete name. [109a11]

The 'ὑπάρχει' construction gives little support for those who want Aristotle to have ten logical *copulae*. Rather, Aristotle has a single relation of subject and predicate signified by 'ὑπάρχει'. Instead he worries about how to formulate the predicate expressions, which fall into ten classes.

The aspect theory of predication has a easy time with the 'ὑπάρχει' construction. 'ὑπάρχει', like 'is', makes an assertion of existence or being, which then must be understood according to the division of being into the categories.<sup>79</sup> 'ὑπάρχει' has the basic meaning of 'be already present' or 'exist really'. When used with the dative, in the 'belong to' construction, it

<sup>77</sup> Mario Mignucci, *Gli Analitici Primi*, pp. 480-1, takes 48a40-b2 to indicate that 'belongs' has a wider extension than 'is predicated of' and 'is said of', which hold only of predicates in the nominative. But this would conflict with *Prior Analytics* I.35. Cf. Robin Smith, *Aristotle's Prior Analytics*, p. 165. We can agree with Mignucci that Aristotle means here: "predicate" in the nominative case. But, without that restriction, 'is' and 'belongs to' have the same extension.

<sup>78</sup> Robert Turnbull, "Zeno's Stricture and Predication," pp. 22-3, might take this passage to concern Zeno's stricture: If S is P, S and P cannot be different. Cf. p. 36, "In any true sentence...the subject and the predicate term name the same thing as two conventional names for the same thing, as simple repetition of the subject term in the predicate..." On the other hand, Alan Code, "On the Origins of Some Aristotelian Theses about Predication," p. 101, notes the non-identity of subject and predicate for Aristotle. So too G. E. L. Owen, "The Platonism of Aristotle," pp. 208-9. Note too that Aristotle takes care to state here that names for items in accidental categories may require a paronymous form in conversion: whiteness belongs to Socrates iff Socrates is white.

<sup>79</sup> Alexander, in *An. Pr.* 366,24, connects 'ὑπάρχει' with 'ὑπαρξίς' (reality). Galen, *Institutio Logica* III.2.

retains that basic meaning.<sup>80</sup> So to say that P belongs to S is to say that P exists in S, or, if you like, that P has its being in S.<sup>81</sup> This ‘ὑπάρχει’ construction then has the merit for Aristotle of insisting that primary substance alone has being fundamentally and that all other things have being only dependently, through existing in the substance. ‘ὑπάρχει’ is an ideal verb to express this view, since, when it is used with the dative, it expresses this dependent subsistence relation, and, when it is used with a subject alone, as in ‘S ὑπάρχει’, it expresses that S really exists. [*Int.* 17a24; 17b2]<sup>82</sup>

That Aristotle has this sort of reason for using ‘ὑπάρχει’ is suggested by his doctrine of unnatural predication, to be discussed in Chapter Eight. According to it a name of a primary substance can never occur in predicate position, in terms of the logical structure of a statement. [*An. Post.* 1.22] Of course. Aristotle is well aware that a sentence can have a primary substance as its grammatical predicate. So what he rejects is having an expression signifying a primary substance occur as the logical predicate.

Now what does this prohibition reveal about the ‘ὑπάρχει’ construction? If a name of a primary substance were in predicate position, it would belong to the subject. But that *could not be*, if belonging to the subject required that it get its being from something else. But that *could be*, if belonging to the subject required only that it be predicated of the subject (i.e., if ‘belongs to’ were only a copula). Aristotle’s denial of such predications as well formed therefore conflicts with the copulative interpretation, and is explained by the aspect theory. So, far from refuting the aspect theory, Aristotle’s use of the ‘ὑπάρχει’ construction supports it.

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<sup>80</sup> Charles Kahn, “Why Existence Does Not Emerge as a Distinct Concept in Greek Philosophy,” p. 323, notes that in later Hellenistic Greek ‘ὑπάρχει’ means ‘exists’, but then came to mean ‘subsist’ in order to explain the divine creation of actual existents from different possibilities. Further in “On the Terminology for *Copula* and *Existence*,” pp. 151-4, Kahn discusses ‘ὑπάρχειν’ extensively. He claims that the original meaning is ‘to make a beginning’ and ‘to be available for’. The latter meaning easily turns into the sense of ‘belongs to’ with a dative attached. In later Greek, ‘ὑπάρχειν’ came to mean ‘to exist’ or ‘to be real’. In this sense it was translated as ‘*existere*’. Kahn disparages those like Stephanus who confuse this later existential use with the earlier copulative use. I have been suggesting that the confusion amounts to but little, as the two lie on a continuum. Likewise Ammonius, in *De Int.* 52,12; Anonymous, in *De Int.* 30,18 takes ‘ὑπάρχει’ [at 16b16] as ‘be true’.

<sup>81</sup> Ernst Tugendhat, *ΠΙ ΚΑΤΑ ΤΙΝΟΣ*, p. 14, n. 14., remarks on the etymology of ‘ὑπάρχειν’, and surveys its meanings in Aristotle: “Als terminologisch fassen wir dann das ὑπάρχει, das lediglich die Faktizität des Vorliegens von etwas ausdrückt...und dessen Anwesenheit, da es ohne Dativ gebraucht wird, an kein bestimmtes Ding mehr gebunden ist und damit frei wird, eine ontologische Bedeutung zu bekommen.” Cf. pp. 230-1. Tugendhat seems to find an existence condition built into ‘ὑπάρχειν’.

<sup>82</sup> Hermann Weidemann, “In Defense of Aristotle’s Theory of Predication,” pp. 76-87, equates the use of ‘ὑπάρχει’ with the use of ‘εἶναι’ plus the dative, as in ‘τὸ ἀνθρώπῳ εἶναι’. Cf. Emerson Buchanan, *Aristotle’s Theory of Being*, pp. 76-7.

Also, Aristotle says that things may “belong” either simply or in a respect, or simply or in combination. Alexander understands the first distinction to concern whether the predicate belongs to the entire subject or only to a certain aspect of it. E.g., ‘white’ belongs simply to snow but to the eye only in respect of its part. [*in An. Pr.* 366,33-367,3]<sup>83</sup> Aristotle routinely uses ‘in a respect’ to indicate the presence of a further qualifier of the statement. [*An. Pr.* 49a28; *An. Po.* 89b32-3; *Soph. El.* 166b37] Again, Alexander says, some predicates belong to the subject simply (‘man’) while others in combination (‘white man’). [367,3-7; cf. *Int.* 21a5-19]

Despite all these distinctions of types of ‘belonging’ that Aristotle makes, he still wants ‘belonging to’ to have some unity in his syllogistic, just as he wants ‘being’ to have some unity in his metaphysics. As a result, he considers predications of attributes from all the different categories, and then struggles to show how to put them into the ‘ὑπάρχει’ construction. We saw him doing a similar, yet far simpler, reduction for simple verbs in *Metaphysics* V.7, to make the fundamental assertion of being become explicit: ‘Socrates walks’; ‘Socrates is walking’. Aristotle has to have unity in the ‘ὑπάρχει’ construction if he wants to mix predications of attributes from various categories in a single syllogism. And Aristotle does want to do this, as his examples in the syllogistic attest; also recall that Aristotle puts *differentiae* and *propria* in accidental categories.

So why does Aristotle struggle so with the ‘ὑπάρχει’ construction if it is so tortuous? I have already given one motivation above. Another is his probably using diagrams in the syllogistic with ‘belonging to’ giving the relation between terms. Another one concerns a distinction that I shall discuss below. Aristotle makes a syntactic distinction between essential and accidental predication, between being said of and being in a subject. These two types of predication sanction different inferences. Here Aristotle seems to have a fundamental ambiguity in his use of ‘is’, between essential and accidental predication.<sup>84</sup> In syllogistic inference, Aristotle uses the ‘ὑπάρχει’ construction, I submit, when he wishes to indicate that the inference under discussion holds for both essential and accidental predication. In this way, the syllogistic can apply to Aristotle’s science.<sup>85</sup> Remember that Aristotle has to allow accidental predicates into his science in order to speak

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<sup>83</sup> At 334,8-10 Alexander says similarly the predicating ‘good’ of ‘pleasure’ is simple, while predicating ‘the good’ of ‘pleasure’ is excessive. Also cf. *Topics* 109a19-20.

<sup>84</sup> Occasionally Aristotle will use ‘said of’ for accidental predication.

<sup>85</sup> Michael Wedin, “Negation and Quantification in Aristotle,” p. 141, says that the ‘ὑπάρχει’ construction is “an invention of Aristotle’s and so ought not to be taken lightly.” However, Wedin then concludes, p. 145, that it “does not occur as a genuine predicate...but serves merely to link terms that do.”

about what is contingent and about what is for the most part, as well as for *differentiae* and *propria*.

### Conclusions

For Aristotle, the normal sort of statement has a verb predicated of a name. When the predication is affirmative, the subject has existential import. The verb states that the subject exists at some time. Aristotle expresses this point by saying that the verb additionally signifies time. So every affirmative statement asserts the existence of its subject. It may assert existence alone, or may also make an additional, explicit assertion, of a certain determination of existence.<sup>86</sup> The basic form of affirmative predication is 'S is'. We may attach a third component to the predicate, 'P', and then have a more complex type of predication: 'S is P'. We may even add further components, and modify the statement further with adverbs, adjectives, modalities, phrases, and clauses. In the more complex types of predication, attention is focused on the more determinate component, which indeed specifies the sort of existence the subject is said to have. So, in cases like 'S is P' 'is' is predicated additionally, as a "third" thing. Thus 'S is P' is to be read as: S is existent as P, and makes two claims, S is existent, and S is P. The existence claim of 'is' becomes "third" in a statement of *tertium adiacens* as existence is specified further in the predicate 'P', which signifies, in Aristotle's protocol language at least, an object in the categories that has being *per se*. Given this further specification, the existence claim of 'is' becomes redundant. [*Metaph.* 1003b26-33]

Aristotle has two ways of presenting this aspect theory: the bipartite, name-verb analysis, and the tripartite, subject-copula-complement analysis. The first has closer links to ordinary Greek usage and the views of previous philosophers. the second has closer links to Aristotle's ontology and to his own science and logic. Yet both express the aspect theory.

If this interpretation is correct, Aristotle should be greatly bothered by affirmative statements of *tertium adiacens* where the subject does not exist. For, on my interpretation, he seems committed to admitting that subjects exist. E.g., 'the goat-stag is an illusion' should imply that the goat-stag is. As it turns out, Aristotle does worry a lot about such examples, as I discuss

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<sup>86</sup> Perhaps in this way we may understand the claim of Francis Pelletier, "Sameness and Referential Opacity in Aristotle," p. 295, that 'exists' does not refer to a property but part of a being a substance. Michael Ferejohn, "Aristotle on Focal Meaning and the Unity of Science," pp. 121-4, analysis 'S is P' as 'S is existent as P in some category C'.

below. In effect, his insistence on being *per se* rules out such cases from his protocol language.

So, if I am correct, the aspect theory of predication suits Aristotle's texts a lot better than the copulative interpretation. Why then has the latter been so dominant?

The copulative interpretation should have more attraction to Platonists than the aspect theory.<sup>87</sup> The aspect theory emphasizes the existence of the subject. Aristotle's version of it has no inclination to allow a multiplicity of types of existence, so as to permit Forms' "subsisting" in a way different from the "existence" of things participating in Forms. Then too Aristotle requires predicates to come from the ten categories. All this tends to make the ultimate subjects, on which all other things depend, the primary substances. In short, Plato requires two sorts of existence, of different degrees and natures, for the two worlds, above and below the divided line.<sup>88</sup> In opposition, Aristotle allows only one sort of existence with further specifications of it.

In the late Greek period, the commentators on Aristotle were typically Platonists or at the least people who sought to reconcile Aristotle's doctrines with those of the Platonists. It would not be surprising for them to read the copulative theory into Aristotle, as it indeed does agree with much Aristotle's text, and much more so with their own intuitions.

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<sup>87</sup> I discuss this issue further in Chapter Nine.

<sup>88</sup> John N. Martin, "Existence, Abstraction and Negation in the Neo-Platonic Hierarchy."

## CHAPTER FIVE

### THE CATEGORIES AS PREDICATES

In *Categories* 2 Aristotle presents a fourfold division of beings, known as the ontological square. There he distinguishes substance and accident, and the universal and the singular. The distinctions that he makes parallel distinctions that he makes elsewhere for types of predications: the essential versus the accidental, and, again, the singular versus the universal. Aristotle also uses these distinctions in his various discussions of the ten categories. In the next chapter I shall discuss the types of predication. Here I wish to investigate the relation between Aristotle's theory of the categories and his views on predication. After all, 'category' ('κατηγορία') means 'predication', and Aristotle has said that the categories are the different ways in which being *per se* may be said.<sup>1</sup> He even calls the ten ultimate sorts of being, substance (τί ἐστίν) quantity, relation, ..., "the figures of predication". [*Metaph.* 1017a23] Above I have claimed that whatever, S, has being *per se* is such that 'S is' is true, where 'is' means real presence, and can be specified further through certain additional predicates. The categories would then be the types, or figures, of such predicates. In this way, Aristotle's doctrines about being *per se* in the *Metaphysics* embody the aspect theory of predication, so I have claimed. Here I shall consider whether what Aristotle says about the various categories agrees with this interpretation. Now Aristotle says too that "being" is divided into the four divisions of the ontological square. So I shall also have to consider the relationship between these two classifications, the one into four, the other into ten divisions.

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<sup>1</sup> 'Predication' in the sense that "the kinds of predication define classes or kinds of predicates, namely the classes of those predicates which occur in a statement of a given kind of predication,"[sc., of being *per se*], as Michael Frede, "Categories in Aristotle," p. 32, says. He also notes that Aristotle is using 'κατηγορία' in a new way. L. M. De Rijk, "On Ancient and Mediaeval Semantics and Metaphysics: 4. The Categories as Classes of Names," pp. 18-9; 21, notes that 'κατηγορία' here means 'predication', but originally 'accuse', or better 'reveal'.

*The Ten Categories*

How Aristotle introduces and describes the “categories” has produced a lot of confusion and controversy. This centers around what Aristotle means by ‘category’ and what he intends the categories to classify. In the *Metaphysics*, when Aristotle speaks of the categories of being, he seems to take the categories to classify real things, i.e., objects and their attributes. Yet ‘category’ does mean ‘predication’, and Aristotle says that they divide up “things that are said”.<sup>2</sup>

Indeed, Aristotle does not even call the list of ten in *Categories* 4 “categories”. Thus we may doubt that that list is a list of categories. Still Aristotle does give the same list at *Topics* I.9 (with the exception of ‘τί ἔστιν’ for ‘substance’). So I shall assume that Aristotle is discussing the “categories” in *Categories* 4.<sup>3</sup> I shall follow custom provisionally and call the items on both lists “categories”.

In his discussion of the categories, Aristotle does appear to switch back and forth, from speaking about words to speaking about real things—at any rate in the fragmentary texts that we have. *Categories* 2 begins with a distinction about “things said” (τὰ λεγόμενα). Some things are said with combination, like ‘man runs’, and others are said without combination, like ‘man’ and ‘runs’. Here the “things said” appear to be expressions: the simple ones names and verbs; the complex ones statements. Having made this distinction, Aristotle next presents the ontological square. He makes the fourfold distinction about “beings” where he seems to be concerned with real objects: beings may be *in* or *not in* a subject, and may be *said of* or *not said of* a subject. Then, after making some remarks about features of predication in chapter 3, Aristotle speaks again of “things said without combination”, and says that these *signify* one of the categories, sc., a substance or quantity etc.<sup>4</sup> Once more the “things said” appear to be expres-

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<sup>2</sup> Michael Frede, “Categories in Aristotle,” p. 35, claims that ‘category’ means ‘predication’ in the *Topics*; ‘kinds of predication’; in the *Categories*, ‘kinds of things’ or ‘ultimate genera’. So too Donald Morrison, “The Taxonomical Interpretation of Aristotle’s *Categories*,” n. 3, distinguishes three senses of ‘category’: 1) types of predication, as in *Categories* 4 2) kinds of predication as in *Topics* I.9 3) kinds of predication of ‘be’ as in *Metaphysics* V.7. On the relation between ‘κατηγορεῖν’ and ‘λέγειν’, see David Miner, *Aristotle’s Theory of Predication*, pp. 73-6

<sup>3</sup> Michael Frede, “Categories in Aristotle,” pp. 30-2.

<sup>4</sup> Aristotle does not use the term ‘categories’ much in the *Categories* to describe this list of ten. Indeed, “Categories” was not even the original title of the book: “The Book before the *Topics*” probably was. See Michael Frede, “The Title, Unity, and Authenticity of Aristotle’s *Categories*,” pp. 17-8. However, Aristotle does so elsewhere. E.g., at *Metaphysics* 1017a23, he describes them as “the figures of predication”, and at 1028a13 as “those predicated in this way”. So I shall use the term ‘categories’, although I do agree with John Anton, “On the



sions, as these signify real objects. He proceeds to speak of each of the categories and the real objects in them. In doing so he uses the distinctions made in the ontological square. E.g., when discussing the category of substance, he says that primary substance is neither in nor said of a subject. [2a12-3] But all this seems out of place if he is discussing expressions and figures of predication and those distinctions concern objects and not the expressions signifying them.

At the very least Aristotle, at any rate the Aristotle of the texts that we have, moves quickly and blithely back and forth between words and objects. The rapidity confuses. As a result, many scholars have worried about whether the categories classify words, things, or some complex entity or notion, like the significations of words.<sup>5</sup> The approach that I have been developing offers some informative perspectives here.

I propose to start simply, by collecting the expressions that Aristotle uses to describe the categories, sc., the list of ten, and noting what else he uses those expressions to describe. Aristotle has introduced the categories as being “what things said without combination signify.” [1b25-6] Moreover, in *On Interpretation* he says that names and verbs are said without combination [16a13-4]. His examples in the *Categories* agree with this.

Meaning of *Kategoria* in Aristotle’s *Categories*,” that Aristotle keeps to the original sense of ‘category’ as (type of) predication, and not to one of ultimate type or kind.

<sup>5</sup> Cf. Michael Frede, “Categories in Aristotle” pp. 29-30, and Jaakko Hintikka, “The Varieties of Being in Aristotle,” pp. 100-1, for a summary of the controversy. H. B. Gottschalk, “Aristotelian Philosophy in the Roman World,” p. 1103, aptly notes that the Greek commentaries grafted later theories onto their interpretations of Aristotle, and hence that they cannot be used as unambiguous evidence of Aristotle’s own views on the categories. Steven Strange, “Plotinus, Porphyry, and the Neo-Platonic Interpretation of the Categories,” pp. 960-1, discusses different Neo-Platonist interpretations of the categories: Plotinus takes them ontologically as kinds of beings, and Porphyry logically as predicates.

In modern times we have two main positions, started by Hermann Bonitz, *Über die Kategorien des Aristoteles*, p. 623, who takes the categories to be the highest classes of real beings, and Henrich Maier, *Die Syllogistik des Aristoteles*, Vol. 2, p. 291, who holds that the categories list senses of ‘being’. Those like Otto Apelt, “Über die Kategorien Aristoteles,” pp. 112-3., and J. L. Ackrill, *Aristotle’s Categories and De Interpretatione*, pp. 78-80, who take Aristotle to be classifying questions, and J. M. E. Moravcsik, “Aristotle’s Theory of Categories,” p. 134, who views the categories linguistically, are instances of the latter. So too F. A. Trendelenberg, *Geschichte der Kategorienlehre*, p. 11, and Christian Brandis, *Griechisch-römische Philosophie*, p. 394; (quoted in Brentano, *Von der mannigfachen Bedeutung des Seienden nach Aristoteles*, trans. R. George, p. 177, n. 141) who says that the categories are “the most general forms of species of propositions, divorced from sentential contexts.”

W. D. Ross, *Aristotle*, p. 22, notes that the categories do not give a grammatical classification, as they do not cover all parts of speech. So he gives a more complex description: “...the categories themselves *are* names, but *qua* names always *designate* ‘things’...” Cf. L. M. De Rijk, “On Ancient and Mediaeval Semantics and Metaphysics: 4, p. 34; cf. too his *The Place of the Categories of Being in Aristotle’s Philosophy*. On the other hand, in the *Metaphysics* Aristotle clearly uses ‘categories’ for the kinds of being.

[1a16-9] Again, in *Topics* I.9 he speaks of the categories of predication as appearing in propositions and signifying a substance, quantity, quality etc.<sup>6</sup> In *Metaphysics* V.7, he also says that the categories are what being *per se* signifies: “‘Be’ *per se* is said to be just what the figures of predication (κατηγορίας) signify: for ‘be’ signifies in just as many ways as these are said.” [1017a22-4] He then adds that, since predicates signify either the substance (τί ἐστὶ) or quantity etc., ‘be’ signifies the same. I infer therefore that for Aristotle ‘being (be) *per se*’, ‘predicates’, and ‘things said without combination’ signify the same—assuming no change of terminology in Aristotle’s thought.<sup>7</sup>

Thus in comparing these texts we have obtained the following lists of things that are equivalent, in signification, it would appear:

*those that are said without combination*  
*things like names and verbs*  
*be (or being) per se*  
*predicates*  
*the figures of predication*  
*the categories*

All these then *signify* the substances and other attributes that Aristotle recognizes as real.<sup>8</sup> These then must be expressions. For, Aristotle says, expressions, verbal or written, are signs of affects of the mind, which themselves are signs and likenesses of real things.<sup>9</sup> [16a1-8] So, although Aristotle does not always make a clear use-mention distinction,<sup>10</sup> he fairly clearly is using the things on this list as significative expressions and as

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<sup>6</sup> Strictly Aristotle says that one who says what something is (τί ἐστὶ) signifies the list of ten, but does not have substance in the list of the “categories of predication”. Rather ‘τί ἐστὶ’ appears instead of ‘substance’ in that list. See below for a discussion of the relation between these two lists.

<sup>7</sup> I am aware that many scholars reject a unitarian approach to the study of Aristotle’s works, and argue that Aristotle presents conflicting doctrines in different texts, due to a development or a change in his thought. I still think it worthwhile to try for a single, unified interpretation until encountering decisive evidence for doing otherwise.

<sup>8</sup> Expressions are not merely linguistic but also logical types, in the mental language, in the sense explained in Chapter Four for names and verbs.

<sup>9</sup> I realize that I am ignoring the complexity, that Aristotle says that written signs are signs of spoken signs, which are signs of the affects of the mind, which in turn are signs and likenesses of real things. But, as Aristotle shows no sign of not attributing the same structure of predication to spoken and written language (once regimented) as to the mental language, I shall ignore these complexities.

<sup>10</sup> Aristotle does have a use-mention distinction: he uses the neuter singular definite article at times to indicate that he is mentioning an expression. Also he indicates mentioning by saying ‘is said in many ways’. But in many contexts either he does not use these devices or their use does not appear clearly.

equivalent in this respect. Perhaps there are some fine differences between these terms. But as used in these texts, I cannot see much evidence for them, without a lot of heavy interpretation. Remember that, so I have suggested, Aristotle understands ‘signify’ in the sense of ‘being a sign for’, and not so much in the sense of a necessary equivalence in meaning, such that two things equivalent in meaning must have all the same attributes, be they formal or material, opaque or transparent. The categories are significative expressions, in the sense of signifying objects.<sup>11</sup>

It is hard to disentangle when Aristotle is speaking of the expression, ‘being’, and when of the things to which the expression ‘being’ refers. Still, when Aristotle says that being *per se* signifies just what names and verbs signify, he surely is talking of the expression, ‘being’, taken *per se*, that is, by itself and not in virtue of an accident. So the list of equivalent items that I have given is a list of expressions taken significatively. In short, the categories classify signs by which we speak about objects.

In this way ‘category’ should be taken, as Michael Frede suggests, as ‘(type of) predication’.<sup>12</sup> Frede proceeds to argue that in *Topics* I.9 substance (οὐσία) is not a category but rather the “what it is”, the essence (τί ἐστιν) of any being, is.<sup>13</sup> ‘Whiteness (or: the white) is a color’ is an example of such an essential ‘is’, for it states what it is to be whiteness. Aristotle even says that in ‘virtue is a state’ ‘is’ states the ‘what it is’, while in ‘virtue is good’ ‘is’ states what sort of thing virtue is; i.e., ‘is’ is a predication of quality. [144a17-8] The list of ten in *Categories* 4 then classifies types of being. Frede thinks that Aristotle came to recognize a “category” of substance only later, in *Metaphysics* VII.<sup>14</sup>

For Frede Aristotle’s first category in the *Topics* then concerns the essence of the subject, which may be in any “category”, i.e., type of being—substance, quantity, relation, etc. E.g., ‘whiteness is a color’ has color, a quality, predicated as the essence. This would fit too with Plato’s ontology. However, I have suggested that, although Aristotle at first treats whiteness as a being *per se*, he concludes that strictly it is not, but exists relative to another: for it to be requires that it be in a substance. Then the τί

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<sup>11</sup> Franz Brentano, *Von der mannigfachen Bedeutung des Seienden nach Aristoteles*, pp. 82-3; 99 [trans. R. George, pp. 56; 67], takes the categories as real extramental concepts. He holds, p. 86, that the categories can overlap *in re* but not *in intellectu*.

<sup>12</sup> Michael Frede, “Categories in Aristotle,” pp. 33-5. John Anton, “On the Meaning of *Kategoria* in Aristotle’s *Categories*,” pp. 9-10, takes the categories as classifications of what can be said, i.e., as fundamental types of attribution. This agrees with the aspect theory. For such a use of ‘κατηγορία’ see *Topics* 107a3; 109b5; 141a4; 152a38; 178a5; 181b27.

<sup>13</sup> As opposed to the traditional interpretation. Cf. Alexander, in *Top.* 65,17-9.

<sup>14</sup> Michael Frede, “Categories in Aristotle,” p. 45. [But cf. 200b27-8; *Gen. Corr.* 217b8-11.]

ἔστι signifies only substance, strictly speaking. Already in *Metaphysics* V.7 Aristotle insists on a substance as the subject for being *per accidens*, even when one is not mentioned in the sentence. This explains why Aristotle can shift to speaking of a category of substance in the *Metaphysics* while still occasionally having a broader use of ‘τί ἔστιν’ and ‘category’ without a change in doctrine. For Aristotle does call substance “a category of being”, i.e., of being *per se*. [1045b26-31] He identifies the ‘τί ἔστι’ strictly and primarily with substance. [1028a11-5]<sup>15</sup>

Thus what is *per se* has many predications, and Aristotle classifies those predications in his list of categories.<sup>16</sup> For my purposes, we can identify ‘τί ἔστι’ with ‘substance’, namely, in Aristotle’s protocol language.<sup>17</sup> The categories list and classify those simple expressions that signify beings *per se*.

### *The Categories as Signs of Beings*

So I have inferred that when Aristotle speaks of the list of categories, he is speaking of expressions that are predicates signifying beings *per se*.<sup>18</sup> The list of categories would then classify predicates into ten types in accordance with what they signify. Does this agree with what Aristotle says about the categories?

The categories were introduced as being what “things said without combination” signify. “Things said without combination” appear to be names and verbs.<sup>19</sup> For Aristotle gives the same expressions, ‘man’ and

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<sup>15</sup> Michael Frede, “Categories in Aristotle,” pp. 43-4, makes this transition too, as indeed does Alexander, in *Top.* 65,16-9. We differ only in that I do not think that Aristotle invents and introduces a “category of substance” later on. After all, Aristotle shows no signs of “making a fresh start” as he is wont to announce.

<sup>16</sup> Donald Morrison, “The Taxonomical Interpretation of Aristotle’s *Categories*,” pp. 20-1. says that the taxonomic model that takes the categories to classify all beings is dubious, since not all beings and terms are classified. Still, p. 39, Morrison admits that what does not fit into a category cannot count as beings. These views are consistent with my claim that the categories classify only beings *per se*, and that not all “beings” are beings *per se*.

<sup>17</sup> Still, ‘τί ἔστι’ does have the merit of emphasizing that the predicate must be universal: as we shall see in the next chapter, Aristotle rules out predications of singulars as unnatural.

<sup>18</sup> I shall speak of ‘items in the categories’, but strictly those items are the real beings *per se* that are signified by expressions in the categories.

<sup>19</sup> Some difficulties persist here. For it is not clear whether Aristotle would allow singular terms to be names, although he perhaps suggests so for ‘this man’ at 1b4. Proper names in particular are absent. More importantly, Aristotle’s remarks do not fit names like ‘being’ nor verbs like ‘is’, not to mention syncategorematic terms like ‘genus’ and ‘transcends’.

‘walks’ 1) as examples of “things said without combination” in *Categories* 2 2) as examples of the categories: ‘man’ signifies a substance; ‘walks’ (he uses ‘cuts’) signifies an action [1b28; 2a2-3]<sup>20</sup> and 3) as examples of names and verbs. Indeed he is making in *Categories* 2 the same point he makes in *On Interpretation*: that a name or verb by itself does not constitute a statement. [16b28-30; 20a31-5]

However, when Aristotle gives the list of items in the various categories, he also has examples like ‘white’, ‘grammatical’, ‘in the market’, and ‘yesterday’. [1b29-2a2] These are verbs, neither from a grammatical standpoint nor according to Aristotle’s own logical theory. For such expressions do not signify time, and some, like ‘in the market’, have significative parts. We have seen a similar problem with Aristotle’s calling ‘white’ a verb in the previous chapter. ‘White’, like ‘grammatical’ or ‘yesterday’, is not a verb, although it can form part of the predicate. According to his theory, ‘in the market’ (‘ἐν ἀγορᾷ’) might count as an inflection of a name, as ‘market’ is in the dative, but still there is ‘in’ too. “Things said without combination”, if taken grammatically, with reference to the variety available in a language like Greek, would have various types: names, verbs, inflections of names and verbs, and derivative terms, and perhaps other types for expressions like ‘yesterday’ and ‘in the market’, if not also for ‘genus’, ‘illusion’, ‘if’, and ‘not’.<sup>21</sup>

How then does Aristotle accommodate all these linguistic types? How can he say that “things said without combination” are names and verbs, and then give examples that are neither names nor verbs?

I claim that, strictly, for Aristotle not all expressions signify beings *per se*, i.e., items in the categories. Some expressions are derivative from more ontologically basic terms, which do signify such items and can be construed as names and verbs. E.g., ‘grammatical’ is a term derivative from ‘grammar’ which is in the category of quality. [8b29-30; 10a30-1] To be sure, Aristotle makes this point only for quality terms. Nevertheless, I suggest that he wishes it to hold for expressions in all the categories.<sup>22</sup>

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Remember that, so I have claimed in the previous chapter, that Aristotle is using not a grammatical but a logical conception of name and verb; i.e., not all grammatical names and verbs qualify as name and verbs in his protocol language.

<sup>20</sup> Strictly, ‘man’ and ‘walks’ are “things said without combination” that signify real objects, and the “categories” would then be the terms predicated of real objects. But Aristotle also takes ‘man’ and ‘walks’ as if they were the objects themselves, and the categories as types of real objects. I discuss this parallelism between words and objects below.

<sup>21</sup> Michael Frede, “Categories in Aristotle,” p. 46.

<sup>22</sup> Similarly L. M. De Rijk, “On Ancient and Mediaeval Semantics and Metaphysics: 4,” p. 20, takes Aristotle to hold that ‘in the Lyceum’ is a universal; sc., ‘being in the Lyceum’. Also Steven Strange, “Plotinus, Porphyry, and the Neo-Platonic Interpretation of the Catego-

Both the basic categorial expressions and their derivative forms may be predicated: 'Socrates is grammatical' and 'this particular grammar is a grammar' are both well formed and true for Aristotle. [1a25-6] But these predications are never interchangeable, and have quite different structures: a basic expression in an accidental category, like 'grammar', may be predicated truly only of an accident; a derivative expression in an accidental category, like 'grammatical', may be predicated truly only of a substance.<sup>23</sup>

This point, about derivative terms, has relevance here because, on this doctrine, a term like 'white' or 'yesterday' (taken adverbially) cannot serve as a simple name, strictly speaking. For their definitions (if they be taken concretely) will be such as 'a thing having whiteness' and 'what is at a time one day before the present day'. Such terms will then signify more than one item. Indeed, generally they will signify a substance (the thing), an accident (whiteness), and, perhaps, the relation holding between them ('having').<sup>24</sup> Although some such expressions, like 'mother' or 'banker', may satisfy Aristotle's definition of 'name' in *On Interpretation* 2, still they make a sentence in which they appear express more than one statement, rather like the 'cloak' example of *On Interpretation* 8. To say that S is a mother is to say that 1) S is a female (human) substance and 2) that substance has a child. "Mother" ends up meaning 'someone having the relationship of motherhood to someone'. Likewise, 'white' means 'something having whiteness', and makes the claim that its subject is a substance and that it has whiteness. Now Aristotle seems to have little tolerance for simple statements making many claims in his logic and science. Consequently, he parses or excludes or ignores them. Instead he concentrates on with sentences that express a single, simple statement. So too he eliminates derivative expressions from signifying items in the *Categories* as they do not signify one item only, but instead signify many.<sup>25</sup> Further, Aristotle excludes expressions like 'goat-stag', 'genus', and 'if'. For he does not consider these to signify beings *per se*.

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ries," p. 971, notes that Plotinus makes the *differentia* 'biped' and not 'biped-ness', and insists on the distinction at *Enneads* VI.3.5.25-9.

<sup>23</sup> Or of another derivative expression ('the white is grammatical'; 'the mother is sitting'). But Aristotle will not allow such sentences as statements of being *per se*, according to his doctrine of unnatural predication, as I shall discuss in Chapter Six.

<sup>24</sup> In the case of a relational accident, like 'fatherhood', two or more substances may be involved.

<sup>25</sup> Porphyry, *In Cat.* 140,9-10, makes the distinction for quality and *quale*, but does not for *relata*. He claims, 127,25-30, that Aristotle makes his point only for quality. However, he himself then makes it for quantity, when he says that man is three cubits only paronymously, 92,24-34; 113,17-25; 124,6, and notes the connection between the failure to heed paronymy and the fallacy of accident, 114,11-2.

I have now argued for two main conclusions: first, the division of the categories classifies expressions that signify real beings; second, Aristotle limits which expressions are significative in ordinary (Greek) language he will allow into that division.

In this way, Aristotle achieves a one-to-one correspondence between linguistic expressions that are significative, in his strict sense, and real beings.<sup>26</sup> Of course, this result follows trivially, given that Aristotle has once again edited the language so as to make it match up with his ontology.

Yet, the question remains, how does he do that editing? How does he decide which expressions signify primitively? To do this he would have to give accurate, “real” definitions. Then he would have to compare those definitions with an inventory of real beings, to determine their fit. Those that fit would ensure their expressions’ entry into the categories.

Well, how does he do this? Tentatively, and seeking to explain the phenomena, as he usually does.<sup>27</sup> (What do you expect from Aristotle: revelation?) He does not provide much detail. But I guess that he proceeds as follows:<sup>28</sup> First he considers merely verbal definitions of various terms. These will include expressions like ‘goat-stag’, ‘genus’ and ‘illusory’ as well as the ones that end up in his categories. Then he compares those to his inventory in extended dialectical discussions.<sup>29</sup> Those that match up

<sup>26</sup> Porphyry, in *Cat.* 58,12-5. Franz Brentano, *Von der mannigfachen Bedeutung des Seienden nach Aristoteles*, p. 137 [trans. R. George, p. 90], notes that the categories do not classify all beings, e.g. potential being. Cf. F. A. Trendelenburg, *Geschichte der Kategorienlehre*, pp. 208-9.

It might be objected that Aristotle disallows expressions signifying individual substances from being predicates in his doctrine of unnatural predication. In the next section I argue that Aristotle does allow expressions signifying individual substances to be predicated. I shall discuss unnatural predication below. I shall suggest that in his list of categories Aristotle is still being fairly descriptive of his *endoxa*, and so allows here what he will end up rejecting in his protocol language: that individual substances can be predicates (of the types of predication that he allows)—as well as perhaps rejecting some of the original list of categories, ‘having’ for example.

<sup>27</sup> Cf. Geoffrey Lloyd, “The Theories and Practices of Demonstration in Aristotle,” p. 373: Aristotle has “signs of a certain tentativeness and flexibility in both theory and practice.”

<sup>28</sup> This explanation does not have direct relevance to my current project, and so I shall not defend nor elaborate it much. See later sections of this chapter, as well as my “Aristotle’s Discovery of First Principles” for further discussion of definition.

<sup>29</sup> Michael Frede, “Categories in Aristotle,” p. 47, holds that Aristotle himself had no systematic derivation of the categories, but made distinctions piecemeal in the *Topics* “as he did not [then?] have a clear view of the logical properties that might serve...” Frede also argues, pp. 46-7, that Aristotle derives his list of the categories neither ontologically nor grammatically—on my view that is a false dichotomy for Aristotle. John Wippel, “Thomas Aquinas’s Derivation of the Aristotelian Categories,” claims, erroneously, that Aquinas came up first with this deduction. On general background, cf. Adolf Trendelenburg, *Geschichte der Kategorienlehre*.

with real beings then are classified into the categories, and their causes investigated. To the extent that that investigation succeeds, real definitions can be formulated, as with Aristotle's examples like 'thunder'. [*An. Po.* 94a7-9]

This account does not solve the main difficulties. For one, how does Aristotle come up with an inventory of real beings? Again, I say: tentatively. He takes those whose existence seems worthy of assumption (ἀξιωματά). He gets at these via critique of the work (ἔνδοξα) of his predecessors, notably of Plato. We have certain *explananda*, namely what we experience. We seek to preserve these phenomena (πιθέναι τὰ φαινόμενα) and to explain them.<sup>30</sup> If the entities that we assume do not serve these functions, then we jettison them. In this way, Aristotle himself jettisoned the Ideas, because they did not explain the phenomenon of change. [*Metaph.* 991b8-11; Alexander, in *Metaph.* 95,5ff. (= *Peri Ideōn*)]

Not coincidentally, this approach resembles the approach to ontology in modern Western science. For it too will propose that certain objects really exist, but jettison them if they do not work out, like the ether of nineteenth-century physics. Perhaps, then, my interpretation might be thought to make Aristotle too much of an instrumentalist and pragmatist. But, after all, he is pragmatic, but not superficially.<sup>31</sup> If we postulate, say, atoms, and then proceed *as if* they really exist, and it then turns out that this postulation has increasing success, then we act and live *as if* atoms really exist. And this is what scientists and even ordinary people today believe. So too the items signified by the categories will exist, if their postulation has great success and few difficulties. Thus, I hold Aristotle to be "naïve" in Nietzsche's sense:<sup>32</sup> although he is quite aware of the problems, difficulties, and complexities of his ontological claims, he asserts them simply. For we act and use them that way.

How does Aristotle come up with his list of categories? Again I suggest that he does so again by analyzing the work of his predecessors, especially in regard to the logic of predication. For instance, Aristotle notes certain asymmetries in the structure of predication: certain expressions seem to signify items that have attributes, but themselves are not had as attributes. Such would be the primary substances. Their expressions can still be predi-

<sup>30</sup> Martha Nussbaum, "Saving Aristotle's Appearances," pp. 275-83, gives a similar account of endoxic method. See too G. E. L. Owen, "Tithenai ta Phainomena," pp. 240-1.

<sup>31</sup> A good, unrelated example is his use of 'ἐπὶ τὸ πολὺ': he classifies, strictly speaking, what holds for the most part as contingent in his logic [*An. Pr.* 34b4-10], but in his scientific practice is willing to recognize what holds for the most part as necessary and essential. [*An. Po.* 87b19-23; *Phys.* 196b10-3; 198b4-8; *Metaph.* 1026b29-31.]

<sup>32</sup> *The Birth of Tragedy* 3-4. The naïveté here has its differences, but the basic stance, of taking a simple approach for sophisticated reasons, remains the same.



cates; we have seen Aristotle himself giving such examples in *Metaphysics* V.7. In this way, terms like ‘Bucephalus’ and ‘this white’ can be used as predicates, for they are used thus in answer to ‘what is it?’ So the asymmetry concerns not the grammar but the ontology of the expressions signifying the primary substances.<sup>33</sup> Still, because of this asymmetry Aristotle will say that these expressions signify objects that are, in a pre-eminent way.<sup>34</sup> Further, he goes on later to ban the predication of expressions signifying primary substances from his ontology, as unnatural: Aristotle’s distinctions of types of predications exclude and legislate more than they classify.

As for the list of ten categories, I suppose that the best guess is either the inductive account offered by Ackrill et al., where Aristotle is classifying answers to questions that may be asked about beings *per se*, or an explanation of the sort hazarded by various Aristotelians who give a “transcendental deduction” of the categories.<sup>35</sup> Indeed, in support of the latter hypothesis, Aristotle might well have begun from the distinction of being *per se* and being *per aliud* in Plato’s *Sophist*. For this will distinguish non-relational categories, like substance, quantity, and quality, from the relational ones, like relation, action, and passion.<sup>36</sup> Then Aristotle might pro-

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<sup>33</sup> L. M. De Rijk, “On Ancient and Mediaeval Semantics and Metaphysics: 4. The Categories as Classes of Names,” p. 21, claims that Aristotle never predicates primary substances, but this claim appears too strong if taken grammatically. On primary substances as predicates cf. W. D. Ross, Aristotle’s *Metaphysics*, Vol. 1, pp. lxxxii-xc. ‘That is Socrates’ is grammatically respectable, although Aristotle will legislate it away as an unnatural predication.

<sup>34</sup> Suzanne Mansion, *Le jugement d’existence chez Aristote*, p. 272: “Le copule ‘est’ doit être prise au sens de ‘est par essence’, si l’on veut faire une classification des genres primitifs de l’être... En autres mots, les catégories disent *ce qui sont par soi* les diverses manières d’être signifiées dans les différents concepts attribuables aux choses.”

<sup>35</sup> On the former, cf. J. L. Ackrill, *Aristotle’s Categories and De Interpretatione*, pp. 78-9. On the latter, cf. Simplicius, *In Cat.* 61,19ff; 121,13-8; 202,10-207,26, who cites Archytas, Eudoxus, et al. as deriving first *quale* and *quantum* and then space and time, and himself proceeds to derive the categories similarly. This tradition may have a neo-Platonist base; see Christos Evangelou, “The Plotinian Reduction of Aristotle’s Categories.” It continues in elaborate form in medieval times. See Franz Brentano, *Von der mannigfachen Bedeutung des Seienden nach Aristoteles*, pp. 148-93 [trans. R. George, pp. 97-118], for a summary of this history. On the derivation of the categories see Adolf Trendelenburg, *Geschichte der Kategorienlehre*; John Wippel, “Thomas Aquinas’ Derivation of the Aristotelian Categories (Predicaments);” Ernst Tugendhat, *Π ΚΑΤΑ ΤΙΝΟΣ*, p. 28; John Anton, “Aristotle’s Theory of Categories in Post-Classical Ontology,” pp. 214-20; and “Aspects of Ancient Ontologies.” See O. Apelt, “Die Kategorienlehre des Aristoteles,” pp. 140-1, for a list of passages where Aristotle lists categories. L. M. De Rijk, “On Ancient and Mediaeval Semantics and Metaphysics: 4,” p. 8, holds that “...Aristotle tries to show (103b25-104a1) that when dividing the dialectical propositions according to the ‘things’ they are about, one always arrives at one of the categories, no matter whether one starts from the subjects or the predicates.”

<sup>36</sup> James Duerlinger, “Predication and Inherence in Aristotle’s *Categories*,” pp. 179-80, says that Plato holds that everything that participates in a Form has the name of the Form. [Cf. *Parm.* 130e-131a; 133d; *Phd.* 102b.] Aristotle then found problems here and so distin-

ceed to make further divisions, like distinguishing substance from the other non-relational categories by appeal to the asymmetry noted above.

However he does it, Aristotle does come up with an inventory of real beings and a classification of predicates. He has said that being *per se* is said in as many ways as there are categories. The categories classify predicates in respect of their signifying real being. All this accords with the aspect theory and with my interpretation of *Metaphysics* V.7.<sup>37</sup>

On this interpretation, the controversy over whether the categories classify real things, expressions, or some hybrid, has little importance. Given Aristotle's ideal, protocol language, which he is establishing in the *Categories*, expressions and real things have an isomorphic, one-to-one correspondence.<sup>38</sup> Aristotle both invents new expressions and discards others in current use in Greek to achieve this mirroring of nature in language. Talk of the signs, as referring, then becomes talk of the realities. His shifts back and forth between language and world then count for little.

### *The Ontological Square*

In *Categories* 2 Aristotle says that this fourfold division concerns "beings" ("τὰ ὄντα"). The square is determined by a matrix of two relations, "being said of" a subject and "being in" a subject. Those that are not in a subject are substances; those that are in a subject are accidents. Those that are said of a subject are universal; those that are not said of a subject are singular. These distinctions appear to concern real objects, or "being" *per se*. For Aristotle holds that the world is populated by singular substances, with their individual accidents and universal attributes, where the latter may be either essential or accidental.<sup>39</sup>

In other logical texts, as I shall discuss in the next chapter, Aristotle analyzes predications as being either singular or universal, essential or accidental. He uses much the same language in discussing these logical types of predication as he does in presenting the ontological square. Again, Aristotle uses the same examples of items in the ontological square, like 'man' and 'knowledge' and 'this white' and 'this man', as instances of items in

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guished two predication relations, 'being said of' and 'being in'. I agree but claim that Plato already showed signs of doing this in his late work.

<sup>37</sup> Cf. Charles Kahn, "Why Being Does Not Emerge as a Distinctive Concept in Greek Philosophy," p. 332: "...the scheme of the categories, which is formulated as a device for distinguishing types of predicates, serves in effect for analyzing types of existence as well."

<sup>38</sup> Michael Loux, "Kinds and Predications: An Examination of Aristotle's Theory of Categories," pp. 11; 17-8, reaches the same conclusion.

<sup>39</sup> D. W. Hamlyn, "Aristotelian Predication," p. 112.

various categories. So it appears that Aristotle is taking the same things to be both “beings” and what the “things said without combination”—the “categories”, also known as “the predicates” or “figures of predication—signify. Once again, Aristotle’s discussion of beings parallels his discussion of predicates. To many modern readers, this parallelism shows that Aristotle is naïvely projecting the structure of his human, Greek experience of thought and language onto the world: his ontology reflects his grammar.<sup>40</sup> In contrast, I hold that Aristotle is projecting the structure of the world onto his language.

What does Aristotle mean by talking about “beings” when he gives the ontological square? If we consult Aristotle’s own lexicon for what he might mean by “beings”, we get the choices of *Metaphysics* V.7. I submit that there the most appropriate choice is ‘beings *per se*’. For Aristotle claims that ‘be *per se*’ signifies in as many ways that the categories signify, and hence items in the categories would “be *per se*”. As I have just, noted, the items in the ontological square appear also as items in the categories. Also, the other choices for “beings” there do not look too attractive. The problematic and the alethic senses do not admit of the divisions of the ontological square, as they apply to all four divisions. Further, Aristotle says bluntly that being *per accidens* is hardly worth discussing, except for sophists. [*Metaph.* 1026b13-21]

In discussing *Metaphysics* V.7, I have argued that Aristotle holds the follow views about ‘being *per se*’: 1) ‘being *per se*’ is said of an item S such that ‘S is’ is true, where ‘S’ signifies an item in the categories 2) ‘is’ means ‘exists’ 3) ‘S is’ can be expanded into ‘S is R’, where ‘R’ signifies a category. ‘Being *per se*’ is itself a predicative expression that is truly predicated of some subjects, and does not signify an entity independent in its own right. Still, when it is predicated truly of some subject, that subject can be called a being *per se*.

Accordingly the “beings” that are divided into the ontological square in *Categories* 2 are just those objects that are said to be *per se*. Since they are already beings *per se*, it is given in advance that they exist and belong to a category, one of the ten.<sup>41</sup> What purpose could the square serve then? The square is constructed from the two relations of ‘being said of a subject’ and ‘being in’ a subject’. Note that Aristotle says “*subject*” (‘*ὑποκείμενον*’). To be sure that may mean ‘substratum’, but also, and more likely here, may

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<sup>40</sup> Richard Rorty, *Philosophy and the Mirror of Nature*, pp. 268-73.

<sup>41</sup> Here the aspect theory has common ground with the copulative: existential import is presupposed in these cases. Cf. Vittorio Sainati, “Die *Kategorien* und die Theorie der Prädikation,” p. 65. But the two theories differ in cases like ‘the goat-stag is a not-being’ [*An. Pr.* 49a24] and with false statements. See Chapter Nine.

mean ‘subject of a statement’, in contradistinction to ‘predicate’.<sup>42</sup> Then ‘said of’ and ‘in’ would indicate two types of predication, also known as the essential and the accidental.<sup>43</sup> In support of this claim, when Aristotle elsewhere is clearly discussing essential and accidental predication, he uses the same expressions and doctrines as he does in presenting the ontological square.<sup>44</sup>

Again he has said that ‘being *per se*’ signifies just what “the figures of predication” signify. [1022a22-4] Real objects and real attributes themselves do not signify nor function as predicates in statements. On the contrary, predicates, like statements themselves, are signs of real objects and their attributes. Terms signifying or referring to them may function as predicates. I suggest that, just as in *Metaphysics* V.7 ‘being *per se*’ is primarily an expression signifying a predicate, and then only secondarily an expression signifying a real object, so too for “beings” in *Categories* 2.

So I claim that in the ontological square Aristotle is taking those expressions that signify beings *per se*, and considering how they are related to their subjects when they function as predicates. He then divides them into four classes, according to their satisfying or not satisfying the two relations, ‘being said of a subject’ and ‘being in a subject’.<sup>45</sup>

<sup>42</sup> However, John Cook Wilson, *Statement and Inference*, Vol. 1, pp. 114-5, claims that ‘subject’ and ‘predicate’ were not used thus by Aristotle but only later by Ammonius [and Proclus?].

<sup>43</sup> Alan Code, “Aristotle: Essence and Accident,” p. 414. James Duerlinger and S. Marc Cohen, “‘Predicable of’ in Aristotle’s *Categories*,” pp. 69-70, point out that the identity is not completely justified textually.

<sup>44</sup> Chung-Hwan Chen, “On Aristotle’s Two Expressions καθ’ ὑποκείμενον λέγεσθαι and ἐν ὑποκείμενῳ εἶναι,” p. 148, claims that Aristotle holds that only essential predication counts as predication, since only that is “said of” of a subject. D. W. Hamlyn, “Aristotle on Predication,” p. 112-3, et al. have disposed of this view: Aristotle does not use the word ‘predicate’ there, and, in any case, is speaking about “beings”.

<sup>45</sup> J. W. Thorp, “Aristotle’s Use of Categories,” pp. 241-3, notes the problems that arise if we conflate essential predication with being *per se*. So he approaches my view of the relation of Categories 2 & 4. Yet, then, p. 247, he proceeds to identify them anyway—mostly because he holds, pp. 253-5, that Aristotle does not mention existential being at all in *Metaphysics* V.7! Charlotte Witt, *Substance and Essence in Aristotle*, p. 110 n. 8, also distinguishes essential predication from being *per se*.

Kwame Gyekye, “Aristotle and a Modern Notion of Predication,” holds that Aristotle does not allow predication over universals: e.g., ‘piety is a virtue’ makes no existence claim. Then a species of genus could not be a subject. Yet Aristotle clearly allows such subjects. [*Top.* 109b4-6] Cf. too Ammonius, in *De Int.* 49,9-10. Theodor Ebert, “Zur Formulierung prädikativer Aussagen in den logischen Schriften des Aristoteles,” pp. 130-2, claims that Aristotle uses plural forms of categorical propositions to express the predication of a genus of a species.

But, it might be objected, Aristotle holds that primary substances are not predicates. So then how could *Categories* 2 classify predication relations?<sup>46</sup> The key is to note that being in and being said of are not the only two predication relations in Greek. In fact, ‘Socrates’ etc. can be predicated, but in a type of predication other than the two described. In *Categories* 2 Aristotle is stipulating what predicates he will allow into his protocol language.

On the other hand, those objects that are beings *per se*, i.e., the items of which ‘being *per se*’ is truly predicated, are already somehow divided up into the ten categories or types of further determinations of the existence of the subject.<sup>47</sup> Satisfying or not satisfying the two relations of ‘being said of’ and ‘being in’ does not determine ten categories but only four classes of predicates. Therefore I propose that the ontological square does not determine categories, i.e., classes of beings *per se*. Further, it does not classify all possible predications of such terms, but determine only those types of such predications that Aristotle is willing to admit into his technical, philosophical discourse. Again, the ontological square does not allow for the predication of names of singular subjects, nor does it have any place at all for names of second intentions, like ‘genus’ as in ‘animal is a genus’, even though Aristotle himself uses such predications! Rather it stipulates the two types of predication relation that Aristotle will allow in his technical discourse to hold between beings *per se*.<sup>48</sup> Primary substances will never become predicates there (except “unnaturally”) and hence become marked off as the primary subjects.

Does not this interpretation rob *Categories* 2 of its ontological character? It does so, but only on a primary level. As I have said, Aristotle does not treat names and verbs and predicates on a grammatical or linguistic level, but on a significative, logical level. His distinction of essential and accidental predicates thus concerns them in respect of their signifying objects. By design and stipulation, the types of predication that he distinguishes in this text parallel the structures, of substance and accident, that he

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<sup>46</sup> So Franz Brentano, *Von der mannigfachen Bedeutung des Seienden nach Aristoteles*, p. 102 [trans. R. George, p. 75], takes the categories to classify the number of ways in which something is predicated of primary substance.

<sup>47</sup> I say “somehow”: Aristotle gives hardly any indication of how he obtained this list of ten. Donald Morrison, “The Taxonomical Interpretation of Aristotle’s *Categories*,” pp. 26-7, says that some items can be accidentally in a category: e.g., ‘white is large’ accidentally [5b4]; ‘the man is a boxer’. [10b1-3] Like Pelligrin, Morrison claims, p. 36 that Aristotle is not much concerned with taxonomy.

<sup>48</sup> Vittorio Sainati, “Die *Kategorien* und die Theorie der Prädikation,” p. 49, takes *Categories* 2 as a theory of all possible predication relations. However, Sainati goes on to note the heavily metaphysical overlay to this logical doctrine. Also Joseph Owens, “Aristotle on *Categories*,” pp. 79-80.

claims exist in the world. Likewise, Aristotle builds this parallelism into his very use of ‘being *per se*’. Consequently, my interpretation does make the distinctions made in *Categories* 2 have logical and not ontological primacy. But, because these logical distinctions are made in terms of what these predicates in Aristotle’s ideal, protocol language signify, they also describe what really exists, and so have ontological relevance. In this way the ontological square ends up also distinguishing the real structures of substance and accident, and of individual and universal.

Aristotle says that “some beings” are in a subject; “some beings” are not. Does not such wording rule “beings” out from signifying predicate expressions primarily? I say, not if we understand how Aristotle uses ‘signify’. By “some beings” he means predicates that signify beings *per se*, i.e., that signify real objects. As reflected in his use of ‘signify’, Aristotle does not recognize a level of meaning, or intension, in addition to a level of real objects, or extension. The expressions are signs of real objects, and reflect their structure. On account of this parallelism, it is easy for Aristotle to switch back and forth between things and their expressions.

This need not even be too naïve: we do the same when we are confident of such isomorphism. E.g., when we discuss the equation, ‘ $2 + 2 = 4$ ’, we speak of the number 2 being added twice in it, as opposed to speaking of there being two tokens of the numeral or numeric sign ‘2’, which refers to the number 2, etc. Even if we are keenly aware of the difference between numbers and numerals, and types and tokens, we do this, because it is so awkward and prolix to spell all this out. And Aristotle tends towards brevity anyway even when he is aware of distinctions important and available for him to make.

To be sure, it is no coincidence that Aristotle’s theory of the logical structure of discourse reflects his ontology. [*Cat.* 12b1-16] But that is not because the ontology mirrors the language and human thought. Rather, it is because Aristotle thinks himself justified in forcing upon the philosopher a protocol language that reflects his conclusions about what really exists. He forces the language to fit the ontology. To do this Aristotle has to regiment philosophical discourse into certain normal forms, and, to do that, he has to reject certain statement forms that are certainly respectable in ordinary Greek language use from a grammatical viewpoint. We have seen him doing this in a small way when he parses ‘he walks’ into ‘he is walking’ and when he uses the ‘*ὑπάρχει*’ construction. We shall see him doing this in larger ways in his doctrines of unnatural predication and paronymy.

In short, I claim that ‘being said of’ and ‘being in’ are types of predication, although not the only such types. Rather, they are the only types of predications that Aristotle wishes to recognize in his ideal scientific language. We have likewise seen Aristotle restricting the vocabulary directly signifying real things to names and verbs, and then only to some of those.

Accordingly, the categories, that is, what things said without combination signify, are the types of real objects that certain predicates signify. However, there are other predicates and other significations besides those listed in the categories. The ontological square classifies the types of predications that Aristotle is willing to admit into his technical language, which is to mirror reality. The list of categories classifies the types of significative subject expressions that Aristotle is willing to admit into his technical language.

One possible objection is that ‘walks’, e.g., signifies an item in the categories, but is not a subject expression, a name, but a verb. Rather, I say, Aristotle is willing to admit ‘walks’ as a name, in certain uses. That is his point in *On Interpretation* when he speaks of a verb in isolation. [16b19-20] Again, given that ‘walks’ signifies an action, it signifies a *per se* being. So Aristotle must admit ‘walks’ to signify an action. More strictly, Aristotle would say: ‘walking is an action’. For, as I shall discuss below, Aristotle requires items in the accidental categories to be named by abstract expressions—names and not verbs—in accordance with his doctrine of paronymy.

Another objection concerns the place of singular substance in the ontological square, as it is not predicated essentially or accidentally, as ‘said of’ or ‘in’. It may be objected that one type distinguished in *Categories* 2 does not concern predicates at all, and hence the distinctions made there cannot apply to predicates. That type of course is that of individual substance, of those that are neither said of nor in a subject.

In reply, names of beings *per se* function as subjects for assertions of existence. The ontological square classifies which of them may also be used of predicates, in Aristotle’s technical language. For not all these beings need be predicates “of” or “in” a subject. Still Aristotle there leaves open the possibility that they are predicated in some other way.

But how then can individual substances (and accidents) be put into the “categories”, the figures of predication? First, note that it does not follow that if something is neither said of nor in a subject that it is not predicated. That would follow only if ‘being said of’ and ‘being in’ were the only types of predication. But they are not. I have claimed that ‘beings’ at 1a20 means ‘beings *per se*’, in the sense specified in *Metaphysics* V.7. But there is also being *per accidens*, for which Aristotle gives the example of a statement, ‘the not-white is’. Presumably, then, Aristotle would accept also certain other statements, of *tertium adiacens*, as instances of being *per accidens*: for instance, ‘not-being is inscrutable’ or ‘this white (thing) is Socrates’. [Int. 21a32] In any case, Aristotle had better have other types of predication. For the fourfold distinction made by these two types of predication has in it only things that really exist., sc., the items in Aristotle’s categories. He has not handled terms like ‘goat-stag’, not to mention ‘infrequent’, ‘illusion’, ‘genus’, or ‘first principle’. Even Aristotle uses

types of predication besides those indicated by ‘said of’ and ‘in’. Likewise, I have pointed out that Aristotle had better have other types of “things said without combination” besides the name and the verb, on the grammatical level at least.

Thus it could well be that expressions signifying individual substances can be predicates and be included among “the figure of predication”, even if they are neither said of nor in a subject. Indeed, in ordinary Greek, as Aristotle himself admits, they are predicated. E.g., he says, “Callias is Callias *per se*.” [*Metaph.* 1022a26-7] In *Posterior Analytics* I.22 he admits that a term like ‘(individual) man’ can be predicated, but then wishes “to legislate” and rule out this type of statement from his philosophical discourse: why not ‘the one with the toga is Socrates’? As I said above, Aristotle regiments the language to fit his ontology, and does not do the reverse. So even individual substance terms may be predicated, even though they are neither said of nor in a subject, and even though Aristotle rules them out as predications respectable in philosophy on ontological grounds.

Also at times we have seen Aristotle expressing statements like ‘Socrates is’ in the form ‘there is Socrates’ (‘ἔστιν Σωκράτης’). Certainly, ‘Socrates’ does not serve as a grammatical predicate here. But, if we take the assertion of existence in the sense of ‘Lo Socrates!’, it starts resembling one. I do not make too much of this point.

More importantly, Aristotle does seem to consider all items in the categories as “predicates” in a basic sense: all expressions in the categories appellate, or label, real existing objects. E.g., ‘that thing [pointed at] is Socrates’. It is not too far a step to consider ‘Socrates’ as specifying the type of being or existence further: ‘this is Socrates’; ‘this exists as Socrates, an individual human substance’.<sup>49</sup> Aristotle was in this tradition of talking of being abstractly. Still Aristotle proceeds to conclude that, although ‘this’ in ‘this is Socrates’, say, is the grammatical subject, it is not the logical subject. Rather ‘Socrates’ is. [*Metaph.* 1017a17-8] So expressions signifying items in all categories, both singular and universal, as predicates, grammatically, although not logically or really.

Also some problems arise by taking (expressions of) singular accidents as predicates. Most today do agree that Aristotle recognizes individual ac-

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<sup>49</sup> Cf. my discussion of *Metaphysics* Z.3 in Chapter Three. Porphyry, *In Cat.* 114,9-10; 115,4-5; 140,2ff., speaks of the same object being substance *qua* man and a quantum *qua* three cubits. This suggests taking the categories as aspects of being, or existence, as the aspect theory of predication asserts. In this way he explains the same thing being in different categories in different respects. So too Simplicius, *in Cat.* 256,21-5. Franz Brentano, *Von der mannigfachen Bedeutung des Seienden nach Aristoteles*, p. 83 [trans. R. George, p. 57], notes that Aristotle calls ‘categories’ ‘πρώσεις’.



cidents.<sup>50</sup> There is more disagreement whether singular accidents can be predicated.<sup>51</sup> If we recognize the importance of using paronymous forms of the expressions, we can admit that Aristotle agrees that they are predicated. E.g., ‘the dog is your father’ [*Soph. El.* 179a34-5]; ‘this casket is wooden’. [*Metaph.* 1049a23-4]

So I claim that Aristotle distinguishes, or legislates, the respectable types of predication in the ontological square, whereas he distinguishes the types of beings *per se*, what the categories signify, in giving his list of categories. Aristotle distinguishes the two types of predication, essential and accidental, with reference to his ontology. For him these two types distinguished suffice to describe what really exists: substances and accidents, both singular and universal.

This interpretation also explains how Aristotle can be consistent in giving a fourfold division of real objects in *Categories* 2 and a tenfold division of those same real objects in *Categories* 4. Many commentators have complained that Aristotle is doing the same task twice, but gets different results, and hence has two, inconsistent lists of the ultimate sorts of being.<sup>52</sup> As a result, some of them have devoted much energy to showing how the list of ten categories can be deduced from the ontological square, while explaining how at the same time the ten categories, and not the four divisions of the square, are the ultimate types of being. On my interpretation, he is doing two different tasks, and giving two different answers. The problem is a pseudo-problem.

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<sup>50</sup> Not G. E. L. Owen, “Inherence,” pp. 252-6, but cf. Michael Frede, “Individuals in Aristotle,” pp. 50-63.

<sup>51</sup> E.g., Hugh Benson, “Universals as Sortals in the *Categories*,” p. 282, claims that Aristotle is committed to asserting that there are individual attributes and these “are predicable of a plurality of individuals.” Benson, p. 283, means by ‘predication’ “an ontological relation that holds between entities not words.” He cites, p. 291, *Categories* 2b1 to support the principle that if x is present in y and z is said of y, then y is present in z. He does admit, p. 292, that Aristotle gives no example of a particular attribute being predicated; at best we have 3a1-4, “all the rest” taken to mean all other items in all categories. Robert Heinaman, “Non-Substantial Individuals in the *Categories*,” p. 306 n. 22, denies that individual attributes can be predicated. He holds that ‘be in’ is not a predication relation; to make it one requires paronymy. This explains why ‘said of’ is often used for the more generic ‘predicated of’.

Perhaps the view most congenial to the aspect theory is that taken by Daniel Devereux, “Inherence and Primary Substance in Aristotle’s *Categories*.” He agrees that there are individual accidents to be understood to be predicated on the lines of tropes.

<sup>52</sup> Hence we have the tradition of “transcendental deductions” of the list of ten categories from the ontological square. See note 35 for a list of sources.

## Differentiae and Propria

This interpretation also has the merit of explaining why Aristotle puts *propria* and even *differentiae* of substances into accidental categories.<sup>53</sup> A *differentia* together with a genus gives a definition of the species. Aristotle recognizes primary substances, or singular things, their species, and their genera to be substances. The singular are primary substances, while the universal ones, the species and genera, are the secondary. [2b29-30] Yet he states that a *differentia* is not in the category of substance. [Cf. *Top.* 144a20-1] However, it also is not in a subject, but still when predicated truly both its name and definition will be predicated truly. [3a21-4] This is quite peculiar since a (substantial) genus plus a *differentia* yields a species, and this product of their composition is a substance.<sup>54</sup>

Some commentators hold that Aristotle puts *differentiae* into the category of substance, at least in his mature works.<sup>55</sup> After all, he states that the form constitutes a primary substance strictly and primarily, and that an ultimate *differentia* like rational describes the form, e.g. of a human being. [*Metaph.* 1036a16-7; 1038a18-21] E.g., Aristotle says that the form of a human being is the soul, and surely the human soul is distinctly what it is more by being rational than by being animal. [*Metaph.* 1037a5; *Part. An.* 641a18] The *differentia*, rational, signifies that substantial form, while the

<sup>53</sup> Donald Morrison, "The Taxonomical Interpretation of Aristotle's *Categories*," p. 164.

<sup>54</sup> Franciscus de Haas, *John Philoponus on Matter*, p. 187, notes that this problem vexes modern commentators little, but vexed ancient commentators a lot. The standard position, that a *differentia* is a *παρόν τι*. [*Top.* 122b17; Porphyry, in *Cat.* 82,17-21; 95,15ff.] Alexander, in *Top.* 47,14-8, and Simplicius, in *Cat.* 55,5-9, merely label the problem but does not solve it. De Haas has an extensive discussion of the various positions, ancient and modern, unitarian and developmental, of the ontological status of *differentiae*. Also Donald Morrison, "The Taxonomical Interpretation of Aristotle's *Categories*," pp. 24-5, notes that the *differentiae* of substance are in another category. See n. 10 for another survey of various positions on *differentiae* now and in antiquity.

<sup>55</sup> E.g., L. M. De Rijk, "On Ancient and Mediaeval Semantics and Metaphysics: 4.," p. 43, claims that *differentiae* are admitted as substance from 3a433 onwards. Cf. Alexander, in *Top.* 38,27-8; 65,32.

Herbert Granger, "The *Differentia* and the *Per Se* Accident in Aristotle," pp. 129; 118-9, argues that Aristotle changes his view: first, he puts *differentiae* of substance into other categories and denies that the *differentiae* are predicates of the genus, and then put them into the category of substance and allows that predication. As, so Granger holds, p. 124, Aristotle takes the *differentiae* to be *per se* accidents, evidently Aristotle changed his mind about those in general. In "Aristotle on Genus and *Differentia*," Granger holds, pp. 78-80, that Aristotle's views on *differentiae* had three stages: 1) *differentiae* give only the *παρόν τι* while the genus the 'τί ἐστιν', as in *Topics* I.5 [Cf. *Top.* IV2; VI.6] 2) the genera equally indicate the 'τί ἐστιν' [*Cat.* 5] 3) *differentiae* more than genera indicate the 'τί ἐστιν'. [*Metaph.* VII.12] Granger analyzes the relation here on the *determinatum-determinabile* relation of *On Interpretation* 11; cf. his "Aristotle on the Genus-Species Relation," pp. 42-7.

genus, animal, signifies the matter.<sup>56</sup> Thus Aristotle says that the *differentiae* must be elements of the substance, and not merely essential attributes. [Part. An. 643a28] Aristotle looks silly. For he stresses that *differentiae* constitute, in great part, the essences of primary substances. But then he denies that qualities are parts of a substance. [Metaph. 1038b25]<sup>57</sup> However, in the *Categories* at least, Aristotle calls such *differentiae* of substances qualities.<sup>58</sup>

As Pierre Pelligrin has emphasized, Aristotle allows the same *differentia* to apply to various genera and species, and does not have a neat Porphyrian tree in his biological classifications.<sup>59</sup> We then should beware identifying the individual substance with the *differentia*, unless we want to identify one species or genus with another.<sup>60</sup> Even in the *Metaphysics* Aristotle admits an apparent variety of *differentiae*. [1042b15] He does speak of the *differentiae*'s being "the principles of being" and the causes for the being a substances. [1042b32-3; 1043a2-4] But then he says that *differentiae* admit of more and less, while substances do not [Cat. 4a8-9], and denies that a *differentia*, even if coupled to matter, is a substance. [1042b32-4; 1043a4] He also insists that a genus is not predicated of the *differentia*. [998b22; Top. 144a32] So Aristotle denies that *differentiae* are in the category of substance even though he admits them to be the major principles and causes for substances. How then should we understand the status of *differentiae* in Aristotle's work?

Again, a *proprium* "is something that does not indicate the essence of a thing, but belongs to that thing only, and is predicated convertibly of it." [Top. 102a18-19] Aristotle's science consists in ways to uncover the true nature of substances, and he cashes out this project by looking for their

<sup>56</sup> James Duerlinger, "Predication and Inherence in Aristotle's *Categories*," p. 197, holds that *differentiae* are in the category of substance and that the name of the *differentia* is 'rational' and not 'rationality' Michael Ferejohn, "Aristotle on Necessary Truth and Logical Priority," sees Aristotle having problems in the "minimal" scheme of the *Categories*.

<sup>57</sup> Thus R. E. Allen, "Substance and Predication in Aristotle's *Categories*," p. 367, says that accordingly Aristotle's doctrine that *differentiae* are not in the category of substance cannot be saved.

<sup>58</sup> Remember that I am pursuing a unitarian interpretation here, so that the *Categories* and the *Metaphysics* should be consistent. Also, I am leaving open the possibility that other *differentiae* of substances may be in other accidental categories: e.g., what a diamond is might be *differentiated* by quantitative attributes. Aristotle gives too few examples to be certain.

<sup>59</sup> Pierre Pelligrin, *Aristotle's Classification of Animals*, pp. 67ff. Porphyry, in Cat. 134.1-2, has the later position of not putting *differentiae* into the category of quality since they are substantial, but, 95,15, calling them *quale quid*, a hybrid of substance and quality.

<sup>60</sup> Donald Morrison, "Le statut catégoriel des différences dans l'Oganon," p. 150, agrees that the *differentia* may belong to any category, and, further may be the *differentia* of one thing while being the species or genus of another.

*propria*. [An. Po. 75a18-31; 76a4-7] But then Aristotle insists that a thing's nature, which includes its necessarily concomitant attributes, is not accidental to it. [Ph. 192b20-3] For him the accidental has no place in science. But why then, once more, does he not put *propria* in the category of substance? If *differentiae* and *propria* are accidents, how can Aristotle then justify studying them and stressing their importance?

First, note that it does not follow that, if *differentiae* and *propria* are accidents, i.e., in a category other than substance, that they are accidental, i.e., predicated accidentally. I have argued that items in accidental categories can be predicated essentially. The claim that Aristotle requires that essential predication requires the subject and predicate to signify items in the same category looks dubious. For Aristotle lets items that are species and proximate genus be in different categories and still have the 'said of' relation. E.g., science (ἐπιστήμη) is in the category of relation, and its species, sciences like grammar, are in the category of quality. [Cat. 6b2; 8b29; 10a31] And yet knowledge and its definition is predicated of grammar, in the relation of 'being said of'. [1b1-3] So that Aristotle holds there to be a synonymy or even a necessary connection between being predicated accidentally and being an accidental predicate, i.e., being a predicate signifying an item in an accidental category, looks less and less plausible. This result fits my interpretation between the relation between the ontological square and the list of categories.<sup>61</sup>

The characteristics that Aristotle attributes to *differentiae* and *propria* give further evidence that he distinguishes accidental predication, i.e., 'being in', from accidental predicates of a non-substantial category. For Aristotle does hold that *differentiae* and *propria* are predicated essentially (καθ' αὐτό) of substances. [An. Po. I.4-5] Yet not being in the category of substance, they are accidents.<sup>62</sup> If 'accident' here is taken in the sense of being an attribute of an object, this position becomes consistent, at least. Then *differentiae* and *propria* can be accidents, yet predicated essentially. So they are "said of" of subject, but still are accidents, attributes in categories other than substance.

Moreover, Aristotle calls all the items in all the categories beings *per se* (καθ' αὐτό). Being *per se* includes substances and accidents, that is, items in the categories. So possibly there can be science of items in accidental

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<sup>61</sup> This result disagrees with Michael Ferejohn, *The Origins of Aristotle's Science*, pp. 82; 94-5, where he links homocategoriality and essential predication.

<sup>62</sup> In the *Topics* Aristotle says, "Since it seems to some that the *differentia* is predicated of the species in the τί ἔστιν." [128a20-1] Here 'τί ἔστιν' might indicate 'substance', but might indicate 'essence'. Then the remark would concern essential predication. The context is endoxic and thus not clear.

categories, although not of things that have being *per accidens*. For ‘being *qua* being’ includes all those that have being *per se*. [*Metaph.* VII.1; IV.1] Aristotle seems to allow sciences of accidents, items signified by expressions in the accidental categories so long as those expressions are predicated essentially of their subjects. Thus Aristotle can speak of “*per se* accidents”. In addition to the *propria*, Aristotle recognizes *per se* accidents, like ‘odd’ and ‘even’, that are essential in the second sense of ‘καθ’ αὐτό’ distinguished in *Posterior Analytics* I.4.<sup>63</sup>

Still, granted that Aristotle does not tie accidental predication and accidental predicates together, why doesn’t he? Surely given that the categories classify being, the essence and formal cause of an object (substance) should be identical to that object and so should reside in the same category.

I do have an answer why Aristotle puts *propria* and *differentiae* into non-substantial categories. It is not an especially profound or complex answer. Indeed, the answer cannot be too complicated if it is to be satisfactory. For Aristotle does not worry about these questions much. He seems to think that the reason why *differentiae* and *propria* are not included in the category of substance is perfectly clear.

The point is that *differentiae* and *propria* are signified by adjectives.<sup>64</sup> They must be, in order to constitute well formed complexes with the expressions signifying the genera and species with which they are combined. In the category of substance the *differentiae* will combine with secondary substances: the expressions used should signify accordingly.<sup>65</sup>

Now Aristotle requires that a complex predicate, such as those used in definitions, like ‘rational animal’, must have a certain logical structure. He

<sup>63</sup> Jonathan Barnes, “Property in Aristotle’s *Topics*,” pp. 139–40, denies that *propria* are *per se* accidents on the grounds that the former are predicated essentially. Given my view, that accidents can be predicated essentially, this objection loses its force. Cf. Demetrius Hadgopolous, “The Definition of the ‘Predicables’ in Aristotle,” Vernon Wedin, “A Remark on *Per Se* Accidents and Properties,” p. 33; William Graham, “Counterpredicability and *Per Se* Predicates,” pp. 192–3; 185. J. E. Tiles, “Why the Triangle has Two Right Angles *Kath Hauto*,” pp. 8–10, denies this interpretation. I hold that *per se* accidents in general are beings *per se* that are accidents, but are predicated essentially (preferably anyway).

<sup>64</sup> So too Michael Ferejohn, *The Origins of Aristotelian Science*, p. 96. But he does not place *differentiae* in non-substantial categories, pp. 97–9. My solution may amount to a logical counterpart of the old distinction of the *differentia* considered in itself and considered insofar as it is related to another. Cf. Theodor Waitz, *Aristoteles Organon*, Vol. I, p. 279; Ernst Zeller, *Philosophie der Griechen*, Vol. II, p. 206 n. 1. See Hermann Weidemann, *Aristoteles Peri Hermenias*, p. 221, for a survey of the literature of the unity of an adjective and name.

<sup>65</sup> Aristotle recognizes *differentiae* and *propria* for items in accidental categories too. There too they need not appear in the same category. My account applies to them too, except that they need not be in a category other than the species and genera to which they are attached.

requires, in his technical language at least, that there be the structure of *determinatum-determinabile*, i.e., of name and attributive. This requirement has not only grammatical but also logical force: Aristotle modifies the Greek language to suit his ontology. Consequently he has more than grammatical definitions of name, verb, and adjective in mind here.

Accordingly in *On Interpretation* 11, Aristotle rejects complexes like 'man animal' as ill formed. He says that such complexes are ill-formed because one component is "contained in" the other.<sup>66</sup> But then 'rational animal' would be ill-formed too, as 'rational', being specific to humans, implies, and so presumably contains, 'animal'. Too all definitions would be ill-formed. Aristotle then must find the complex 'animal man' quite different from 'rational animal'. And he does.<sup>67</sup> I submit that the difference lies in their grammatical and logical structure: two names, strictly speaking, cannot combine as they name separate items; rather only a name and some other type of expression, an attributive, adjectival, paronymous one, can combine. This requirement holds on the logical level of Aristotle's ideal language. But, as his language purports to mirror reality, it has ontological import too.<sup>68</sup>

And his theory reflects this interpretation. For, Aristotle says, adjectives are paronymous expressions, inflection of names, derivative from abstract names, as 'grammatical' from 'grammar'. Aristotle holds that only the derivative expressions may be predicated truly of subjects naming items in a different category.<sup>69</sup> On these lines a complex like 'rational animal' can be unpacked as the predication, 'animal is rational', or 'has rationality'; likewise for 'grammatical man'. But an ill-formed complex, like 'grammar man' is correlated with the *necessarily* false predication, 'man is grammar', *pace* St. Anselm. So generally only adjectives, derived paronymously from expressions in non-substantial categories, can form well formed complexes with a substance term.<sup>70</sup>

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<sup>66</sup> See Allan Bäck, *On Reduplication*, Chapter Three.

<sup>67</sup> For the first he rules out; the second he embraces as a definition. See n. 71 and *Topics* VI.3. Aristotle wants to keep complexes of *differentia* plus genus as well formed and not redundant for the work that he has *differentiae* do in biology. See *Parts of Animals* I.3.

<sup>68</sup> James Duerlinger, "Predication and Inherence in Aristotle's Categories," p. 180, notes that for Plato, the problem is why, when an individual participates in a Form, in some cases it takes on the name of the form (Man) and other times it does not (Beauty).

<sup>69</sup> D. W. Hamlyn, "Aristotle on Predication," pp. 115-6, says that 'white' is a homonym with respect to Socrates and whiteness, as it will have a different definition, whereas whiteness itself is an unusual homonym as it depends for its existence on Socrates. [Cf. *Metaph.* 1003a33; 1096b26]

<sup>70</sup> Alexander, in *Top.* 137,2-29, has a rather obscure discussion of the paronymous predication of *differentiae*. Aristotle says that the genus or species is never predicated paronymously. At *Topics* 109b9-10 Aristotle says that 'the white' does not signify a genus "since it

To turn this point around, derivative expressions are deprived of being in their own right: they do not name items in the categories.<sup>71</sup> A substantive like ‘grammar’ names a quality, but a derivative like ‘grammatical’, meaning ‘having grammar’, does not signify something that exists or has *per se* being itself, but an attributive, something needing to be attached to a substantive, to have being *per se*. That is why, I shall argue, Aristotle does not allow derivative terms (except in the case of substance!<sup>72</sup>) to signify items in the categories.<sup>73</sup>

Let me stress again that for Aristotle paronymy concerns more than the form of expressions signifying being *per se*. For Aristotle introduces paronymy as a relation between two beings and not between two expressions.<sup>74</sup> So then, e.g., ‘grammar’ and ‘grammatical’ both signify beings *per se*. Aristotle takes grammar as the fundamental being, and the grammatical as derivative—grammar is related externally to a substance serving as its *determinatum* and subject. Aristotle ends up rejecting the derivative beings as items described in the categories. After all, they are not simple: ‘grammatical’ is a disguised complex expression, ‘(a thing) having grammar’, much like ‘cloak’ in *On Interpretation* 8. Here again Aristotle regiments his language to reflect his ontology.

Now, like incidental accidents, sc., those items in accidental categories whose expressions are predicated accidentally of substantial subjects, *differentiae* and *propria* are also signified by derivative terms. Hence, they

has been said paronymously, nor as a definition or *proprium*—but only because it can be applied to many other things. The context does not support the claim that *propria* are not predicated paronymously though. Alexander thinks that Aristotle is making a point against Lycophron. Simplicius, in *Phys.* 124,1-4, emphasizes the paronymous nature of *differentiae* and concludes that thus the substance is not just what the *differentia* is.

Cf. Ammonius, in *De Int.* 49,24ff.; Stephanos, in *De Int.* 1315-8. See too F. W. Zimmermann, *Al-Farabi's Commentary and Short Treatise on Aristotle's De Interpretatione*, pp. xxiv-xxvi.

<sup>71</sup> In this sense, the interpretation that *differentiae* do not name beings has merit. Strictly speaking, the *differentia*, sc., the term derived paronymously, does not signify an item in the categories. D. W. Hamlyn, “Aristotelian Predication,” p. 116; Michael Ferejohn, *The Origins of Aristotelian Science*, p. 98; Michael Wedin, “The Strategy of Aristotle's Categories,” pp. 4-5; cf. *Topics* 128a26.

<sup>72</sup> If indeed Aristotle would consider ‘dog’ a derivative form of ‘doghood’ at all. This asymmetry, of the expressions signifying substances and those signifying accidents would have provided Aristotle evidence for the priority of substance, as being the ultimate subject. Cf. *Metaph.* VII.3.

<sup>73</sup> See Chapter Eight for further discussion. Also cf. *Metaphysics* 1043b2-4 “soul and being soul are the same, but man and being man are not the same...” Plotinus, *Enneads* VI.3.5, too stresses the importance of paronymy and holds that e.g., “rationality” signifies an item in the category of quality while “rational” designates one in the category of substance.

<sup>74</sup> J. L. Ackrill, *Aristotle's Categories and De Interpretatione*, p. 70. Vittorio Sainati, “Die Kategorien und die Theorie der Prädikation,” pp. 68-70.

too presuppose a substantive thing to which they may attach themselves. In this way, *differentiae* and *propria* may be lumped together with those incidental accidents. [*Top.* 109a10-26]<sup>75</sup>

But still there does not seem to be anything wrong with the predication, 'man is animal'. So why does not Aristotle accept the complex 'man animal'. I hazard the guess that one factor contributing to his position is this general conclusions about adjectives.<sup>76</sup> 'Man animal' is ill-formed since it does not have a *determinatum-determinabile* structure.

This answer does present problems. Does it not appear perfectly arbitrary, a mere accident of the formation of certain natural languages, that man is a species in the category of substance because 'man' (or 'ἄνθρωπος') is a substantive? Suppose it had happened that Indo-European languages had used 'human' more frequently than 'man', and also had a special substantive term '\*rationalor' in addition to the adjectival 'rational'. Would then 'human' signify the *differentia* in an accidental category, and '\*rationalor' a species in the category of substance? This is a serious problem, but not an objection to my interpretation. Rather, it is a common criticism of Aristotelian philosophy, that it assumes that the structure of the world mirrors the structure of (the Greek) language.

In any case, note that Aristotle often shows himself well aware of the limitations of the Greek language, and well inclined to modify or rearrange the language to suit his philosophical insights. So, in the *Nicomachean Ethics*, he presents virtues and vices for which there are no common names; in *Parts of Animals* I.4 he considers changing the names for genera of animals; in the *Categories* he ignores and, on the contrary, inverts, like Plato (!), the grammatical derivation of 'whiteness' from 'white'. He even says, "Sometimes it might be necessary to make names if no name be provided in relation to which [the *relatum*] might be given." [7a5-8] So we should not conclude hastily and pity Aristotle as a victim of grammatical illusion.<sup>77</sup>

Further, if we take insight from a biological perspective, we may not find Aristotle so naïve. In the development of a natural organism, it would appear that the human stuff is there from the beginning. Certain aptitudes and abilities are there too, but often only potentially. Further, an individual like Socrates is busy being human all the time, even though he is not busy being rational or busy laughing all the time. We may say, Aristotle says,

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<sup>75</sup> Alexander, *In Top.* 135,22-3; 136,15-137,4.

<sup>76</sup> For a full discussion of this problem, with a more adequate solution, see my *On Reduplication*, Chapter Three.

<sup>77</sup> At *Topics* 104b36-105a2 Aristotle shows his indifference for making up names, so long as the realities are uncovered. Cf. Alexander, *In Top.* 82,29-31. Yet elsewhere Aristotle does make up names...



that Socrates is rational or risible while he is asleep, in the problematic sense of 'is'. Still he does not have those attributes fully, as second actualities, at all times, or even as first actualities when a child. Yet, Socrates continues to be a human being, in fact, on a more amorphous and undifferentiated level, even while he is asleep or young.<sup>78</sup> In the human stuff are the seeds and secret springs of all these attributes. So it might not be completely without reason to take 'man', as signifying the human stuff, to be the term signifying something in the category of substance, while taking the human functions to be adjuncts of the human substance, some essential, some accidental.<sup>79</sup>

### *Existence and Essence*

Perhaps the strongest evidence in his logical writings that Aristotle uses and explicitly accepts the aspect theory of predication comes from his discussion of stages of inquiry in demonstration. The sequence of inquiry has the same structure that the aspect theory attributes to statements. Just as in statements the assertion of real existence is primary and the other specifications build upon that foundation, so too for Aristotle in scientific inquiry existence of the subject is the basic stage. The assertion of the subject's categorial essential predicates ('M<sub>e</sub>'), and then finally the assertion of its other predicates, arranged in order of priority, follow. Even the distinction of being *per se* and being *per accidens* is reflected here.

Aristotle says, "We seek four things: the that (ὅτι), the because (διότι), the if it is (εἰ ἔστιν), and the what it is (τί ἐστιν)." [*An. Po.* 89b24-5] Aristotle arranges these into two pairs, where the first member is prior to the second, while the second pair is prior to the first.

(1) The first stage of inquiry consists in asking whether something is or is not simply: "e.g., if a centaur or god is or is not. I mean 'if it is or is not simply', and not 'if it is white or not.'" [89b32-3; cf. 90a4-5]<sup>80</sup> Aristotle says that this first stage is to verify a statement of form 'S is'.

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<sup>78</sup> But maybe not, since only when engaged in theoretical activity is a human being fully actualized? This too is a common problem for Aristotelians: Aristotle says that being human is not a matter of degree, yet the slave, the child etc. do seem on his standards to be less human than Pericles or Socrates in his prime.

<sup>79</sup> At any rate, this is the sort of argument that Greg Bayer, "Classification and Explanation in Aristotle's Theory of Definition," p. 499; "The What-Is-X? Question," p. 323, attributes to Aristotle.

<sup>80</sup> Aristotle often contrasts being simply with being something or other. David Bostock, trans. & comm., *Aristotle's Metaphysics: Books Z and H*, p. 49.

(2) The second stage assumes that the statement, 'S is', has been verified, and then asks for the definition of 'S'. For it asks the question, 'what is it?', which, when used substantively, is one of Aristotle's expressions for 'definition'. The task is to find a definition, "a statement of the essence" [93b29: *τί ἐστίν*; cf. *Metaph.* 1029b20]. Judging from Aristotle's examples, a definition is a statement of form, 'S is P', where 'S' is as in the first stage, and 'P' a complex expression consisting of the name of the proximate genus and the name of the *differentia*. E.g., 'man is a biped animal'. [91a28] The type of predication here is of course essential.

(3) Next comes the stage of inquiring about facts about the original subject 'S'. This concerns verifying whether S is something or other, for instance, whether the sun is eclipsed. [89b26] From the examples it is clear that the predicates here are not necessarily, or even usually, the predicates of the definition of 'S', but other ones, naming items in any category. The predication too may be essential or accidental, although in his scientific investigations Aristotle is mostly interested in predications of *propria* or *per se* accidents.<sup>81</sup>

(4) Finally Aristotle looks for the reason why the predication verified in the third stage is true. If that statement is immediate, then it is true *qua* itself and essentially. [73b25-33; 91a33-4; 94a9-10] Being immediate, the predication has no mediator, i.e., it does not have, a middle term to construct a syllogism with it as conclusion. If the statement is mediate, then there is a reason besides the subject's being what it is, as stated in its definition. Then the expression naming that reason will serve as a middle term. E.g., it is a fact that the isosceles triangle has its internal angles equal to two right angles. [90a33; 73b33-74a3] The reason lies in its being a triangle. For a triangle has its internal angles equal to two right angles. This explanation generates a Barbara syllogism that qualifies as a demonstration of the reasoned fact (*διότι*): since every isosceles is a triangle and every triangle has its angles equal to two right angles, an isosceles has its angles... The major premise, 'every triangle has its angles equal to two right angles', is true *qua* triangle, i.e., because the triangle is a three-sided plane figure. This explanation does not generate another demonstrative syllogism, or generates a trivial one, since 'triangle' and 'three-sided plane figure', its definition, signify the same. [91a33-b11] At best, this would provide the syllogism, 'every triangle is a three-sided plane figure; every three-sided plane figure has its angles equal to two right angles; therefore every triangle has its angles equal to two right angles'. But this does not seem to be a

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<sup>81</sup> However, Aristotle does waver in his insistence that *propria* be predicated necessarily (essentially?) of the subject. So too compare his varied accounts of *ἐν τὸ πολὺ*. Cf. Mario Mignucci, "ὅς ἐν τὸ πολὺ et nécessaire dans la conception aristotélicienne de la science."

different syllogism, since the *definiens* and the *definiendum*, although different expressions, are the same name. [91b9-11]

So we obtain the following scheme, rearranged so that items on top are all prior to items below them:<sup>82</sup>

*S is [existence] 'S is'*  
*what S is [definition] 'S is M<sub>e</sub>' [G-D]*  
*that S is P [fact] 'S is P'*  
*because S is P [reason] 'S (qua M<sub>e</sub>) is P'*

where 'M' is the complex predicate, 'G-D', that gives the definition of 'S' in terms of genus plus differentia; the subscript in 'ϕ<sub>e</sub>' indicates an essential predicate.

This sequence of inquiry strongly resembles the structure of predication according to the aspect theory. For, on both, the base is a statement of existence. Once the statement of existence holds, the statement must be able to be expanded so as to state what sort of being it is.<sup>83</sup> Once that statement is verified, other predicates of S may be considered, so that we obtain the full range of true, categorial predications of S, both the essential and the accidental ones. Note that all these predications count as statements of being *per se*. Finally, an explanation may be demanded for the truth of those predications. The explanation may be given by a further specification of the predication, where that specification is indicated by a '*qua*' phrase of form '*qua* M<sub>e</sub>', or where it is explained by expanding that specification into a demonstrative Barbara syllogism, using 'M<sub>e</sub>' as the middle term.<sup>84</sup>

In Aristotelian science, a necessary truth condition for a statement, 'S is P', is that S is, or exists. No statement, be it giving a definition or an essential or an accidental predication, can be true unless the subject exists. On the other hand, a statement of existence must be able to be expanded.<sup>85</sup> For the subject to exist requires that it be a substance of a some sort or other: that Socrates is requires that Socrates be a human being, i.e., a ra-

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<sup>82</sup> All this is fairly standard doctrine. See Alfonso Gomez-Lobo, "The So-Called Question of Existence in Aristotle, *An. Po.* 2.1-2," n. 4, for a review of the secondary literature.

<sup>83</sup> Leslie Brown, "Being in the *Sophist*: A Syntactic Enquiry," p. 70, has this interpretation.

<sup>84</sup> I am aware that this account does not match Aristotle's actual practice, in e.g., *Posterior Analytics* I.13, not to mention the biological works. Perhaps Aristotle has this doctrine as the ideal, but is willing to settle for less in actual practice. One problem lies in his not stating many definitions clearly. But I pass on this problem. Anyway, Aristotle himself is aware of it; see *Prior Analytics* I.43.

<sup>85</sup> This reciprocity recalls that of the first two senses of 'καθ' αὐτό' in *Posterior Analytics* I.4.

tional animal. More complex statements, including those of *tertium adiacens*, carry on the expansion of predicates for S.

Aristotle's discussion of the stages of scientific inquiry also uses the distinction between being *per se* and being *per accidens*. He says, "We sometimes have the 'if it is', i.e., the statement of existence, 'S is', by accident (κατὰ συμβεβηκός), and other times we have something of the thing itself. [93a21-2] Aristotle then recognizes two types of 'if it is', *per se* and *per accidens*; these are the two types of being with the same name. As in *Metaphysics* V.7, being *per se* is, primarily, in its own right, while *per accidens* being is, secondarily, as it is derived from and parasitic upon being *per se*. Now Aristotle says that, strictly, it is not known of something known to be *per accidens* either that it is or what it is. [93a24-7]<sup>86</sup>

These remarks make sense in light of the discussion of being *per accidens* in *Metaphysics* V.7. There Aristotle gives the example, 'the not-white is', and says that it is *per accidens* since the not-white is a man, and a man is. But this reasoning does not justify an existence claim, that the not-white exists, i.e., is *per se*. Aristotle then is restricting the 'is' of "if it is" to 'is *per se*'. In doing so he does allow for the existence of the accidental categories and for having science of items in them. For these items too have being *per se*. Further, since statements of being *per accidens* do not make an existence claim, Aristotle denies that they have definitions, strictly speaking. [92b5-8] So too, on the aspect theory, every statement of definition makes a statement of existence: 'man is a rational animal' asserts that man exists as a rational animal.

So the first question, 'if it is', distinguishes subjects that have being *per se* from those that do not. Now Aristotle says that something has being *per se* only if it is an item in the categories as it must be "what one of the figures of the categories signify." [*Metaph.* 1017a23] Then we can ask, what is it?—i.e., which one of those beings it is. For this kind of being requires further determination: 'S exists as a P':

So it is clear that 'is' is said in just so many ways: for a threshold is, because it is situated thus, and its being signifies its being positioned in this way, and being ice being solidified in this way. [*Metaph.* 1042b25]

Because S is the thing that is, P, a determinant in one of the categories, it has being *per se*.<sup>87</sup> So, oddly enough, even though a statement of *secundum adiacens* is prior to all those of *secundum adiacens* for a subject, we can

<sup>86</sup> Thomas Upton, "The if-it-is Question in Aristotle," holds that Aristotle distinguishes three types of existence claims: the ordinary, the scientific, and the metaphysical.

<sup>87</sup> Simplicius, *In Cat.* 292,22-6, even goes so far as to speak of Socrates as substance, as *quale*, as *quantum*... In this way, the categories mark out aspects of being.

construct a syllogism explaining why S is *per se*, as Aristotle states. [*An. Po.* 89b37-8]<sup>88</sup> Its being P, its essence is the reason why it has being *per se*.<sup>89</sup>

### *Essence and Definition*

As the requirement for existence before definition may strike us as strange, let me dwell on it.<sup>90</sup> Aristotle defines a definition as a statement of the essence of something. [*Metaph.* 1041b4-5] We have seen that Aristotle requires existential import for the *definiendum*. Indeed, his most common expression for ‘definition’ reflects this: the definition is the ‘what it is’ (‘*τί ἐστίν*’)<sup>91</sup>. Given Aristotle’s penchant for statements of the form, ‘S is’, we might as well turn it around, to read ‘*τί ἐστίν*’ as ‘it is what’ or ‘there is something’,<sup>92</sup> i.e., it exists as something, where ‘what’ or ‘something’ indicates that a further, categorial specification is to follow ‘is’. Likewise, Aristotle’s phrase for ‘essence’ (or better: ‘quiddity’), literally ‘the what it is to be’ (‘*τὸ τί ἦν εἶναι*’), can be construed in this way.

Again, Aristotle often speaks of the essence of a particular thing, like dog, in a phrase of the form, ‘to be S’, like ‘being dog’. The construction is the infinite ‘to be’ plus the noun in the dative. For Aristotle nouns in the dative are not names, but inflections of names. This suggests that Aristotle would view such nouns as modifiers or derivatives of names or verbs, just as for paronymous terms. This structure again can be taken to reflect the aspect theory. For an essence states what a thing is, namely, a being in a certain mode. The dative can be taken to indicate the means or cause: e.g., ‘being (or existing) through being a dog’. This would incline Aristotle to

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<sup>88</sup> So Alfonso Gomez-Lobo, “The So-Called Question of Existence in Aristotle, *An. Po.* 2.1-2,” p. 73, can be answered. We may find such syllogisms strange. But Aristotle does have them, e.g., at *Prior Analytics* I.38. I can accept much of what Gomez-Lobo says, e.g., about the predicative elliptical sense, p. 79, so long as his account is restated in terms of the aspect theory. He has trouble, p. 89, explaining the example ‘if there are centaurs’ on a non-existential reading and is forced to say “there are no individuals that can be identified as instances of those kinds.”

<sup>89</sup> Cf. Suzanne Mansion, *Le jugement d’existence chez Aristote*, p. 183.

<sup>90</sup> E.g., David Bostock, *Aristotle’s Metaphysics: Books Z and H*, p. 51, accuses Aristotle of conflating the ‘is’ of existence and ‘is’ of definition in *Metaphysics* VIII.2.

<sup>91</sup> The other main one is ‘*ὁρισμός*’; sometimes also ‘*λόγος*’ or ‘*ὅρος*’. [*Top.* 101b37; *Cat.* 1a2]

<sup>92</sup> As ‘what’ and ‘something’ in Greek differ only in accent marks, and these arise later than Aristotle’s time. ‘What’ of course translates ‘*τί*’ better originally. But my point with ‘some’ is to show how easy is the transition between Aristotle’s expression for ‘definition’ and the aspect theory.

identify a primary substance with its essence, as he does. [*Metaph.* 1032a6-10] Socrates has the essence of man, as Socrates exists through being a rational animal. Also the construction of 'be' plus the dative suggests the 'ὑπάρχει' construction, which I have discussed in Chapter Four.

For Aristotle, definition strictly, the one that presupposes real existence, "...is a statement of what a name or another, namelike statement (λόγος) signifies." [93b30-1] By 'namelike statement' Aristotle probably means a complex expression, like a *determinatum-determinabile*, serving as the *definiens*. In this way, he holds that the name and its definition signify the same. [*Top.* 101b38-102a2] Both then signify what really exists. Like names, definitions have existential import. The definition should describe clearly the objects and attributes signified by the name. Ideally, the terms composing a definition should have an isomorphism with the real items and their interrelations. In this way, a definition or similar characterization<sup>93</sup> is "a namelike statement", as it summarizes this structure of real things, 'S is G-D', means 'S exists as a G-D'.<sup>94</sup> Here the determination, 'G-D', represents a certain structure of genus in relation to *differentia*.

However elsewhere Aristotle seems to use 'signify' differently in discussing a definition. He distinguishes what a name signifies from what it is: "For no one knows what (τί ἔστιν) not-being is, but what the statement or name signifies, when I say 'goat-stag', while it is impossible to know what the goat-stag is." [92b5-8] Aristotle is not using 'signify' in his usual sense of 'being a sign of a real object', but in a more common sense of 'means'. So he can define 'goat-stag' in the sense of giving expressions equivalent to it, but strictly, in his protocol language, it is not a signifying name.<sup>95</sup> In the same way, so I have suggested, Aristotle accepts the common endoxic uses of 'be' provisionally, before proceeding to rule out some of those uses. Likewise, in beginning his scientific investigations, Aristotle takes common claims about what exists, as reflected in ordinary speech as well as in expert testimony, and then asks, 'does that exist?' He has to have some notion of what is being talked about, what 'goat-stag' as opposed to 'chimera' is supposed to signify endoxically. This commits him only to granting a merely verbal and not a real definitions, i.e., in later terms, existence *in intellectu*, and not existence *in re*. [*Int.* 21a32-3; *Top.* 180a36-8] So we may call de-

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<sup>93</sup> Cf. 'λόγος' at *Categories* 1a2.

<sup>94</sup> R. E. Allen, "Plato's Early Theory of Forms," p. 327, says: "Thus the real definition of triangularity would be: 'Triangle' means 'plane figure with three angles, and there are triangles.' This is Euclid's view and by some accounts it is Aristotle's own."

<sup>95</sup> T. H. Irwin, "Aristotle's Concept of Signification," pp. 257-8, claims that for Aristotle 'goat-stag' "signifies" something to us, namely the thought, although not the real essence. Cf. too David Charles, "Aristotle on Names and Their Signification," p. 50.

initions of ‘goat-stag’ merely verbal—perhaps in the sense of reporting the common, endoxic usage<sup>96</sup>—and not definitions, strictly speaking.<sup>97</sup>

In indirect proof we often do this: define a term, or suppose something to exist, and then prove that supposition to be impossible. The initial supposition does not guarantee existential import, namely, an affirmative answer to ‘does it exist?’ In this way Aristotle distinguishes hypotheses or suppositions from “positings” of existence in his syllogistic.<sup>98</sup> A hypothesis does seem to make an additional claim of existence. Even with existential import for all the definitions as a presupposition, a hypothesis would serve to assume that a particular of the relevant type exists here now, when it does not in fact. This happens frequently in geometrical proof. The proofs make conclusions that hold for all instances of that type, and so the hypothesis seems to introduce an “arbitrary object”.<sup>99</sup> Again, in indirect proof, something, e.g., ‘the largest positive integer’, may be assumed to exist, in order to prove that it does not exist. The use of ‘hypothesis’ thus signals the presence of a special assumption of existence, often counterfactual.<sup>100</sup>

Likewise, when Aristotle distinguishes a definition from a hypothesis, and says that the definition does not assert existence, while a hypothesis does, he again is considering merely verbal equivalents and not definition strictly. [*An. Po.* 72a18-24; 76a32-6]<sup>101</sup> Thus a mathematician may define an expression like ‘unit’ without *supposing* that there is a unit. E.g., she

<sup>96</sup> Perhaps we can use Upton’s distinction mentioned in n. 86, and take the “ordinary” to indicate endoxic usage. David Charles, “Aristotle on Names and Their Signification,” pp. 42-6, offers a elaborate account of how names for Aristotle first signify thoughts, and then it has to be determined whether or not the thing signified exists *in re*.

<sup>97</sup> In modern terms, such could be called ‘nominal definitions’. Yet, because of Aristotle’s phrase, “a namelike account”, ‘nominal definition’ in this context has come to mean a definition signifying a real object, albeit not its causal principle. Hence I am using ‘merely verbal definition’ and follow custom in holding that “nominal definitions” assert existence. Cf. Robert Bolton, “Essentialism and Semantic Theory in Aristotle,” p. 522; David Demoss and Daniel Devereux, “Essence, Existence, and Nominal Definition in Aristotle’s *Posterior Analytics* II.8-10,” p. 139: “The account of what a name signifies is not a nominal definition unless the thing defined exists.” Thus ‘goat-stag’ does not have a nominal definition: “it is possible to formulate an account of what ‘goat-stag’ signifies but this cannot be an account of what a goat-stag is.” In effect they hold, p. 142, that nominal definition concerns the accidental features of being *per se*. See p. 136 n. 7 for a survey of the secondary literature.

<sup>98</sup> Robin Smith, *Prior Analytics*, p. xxx.

<sup>99</sup> In the sense of Kit Fine, *Reasoning With Arbitrary Objects*.

<sup>100</sup> Cf. Igal Kvart, *A Theory of Counterfactuals*; Baruch Brody, *Identity and Essence*.

<sup>101</sup> —assuming that ‘ῥῶα’ at 76b35 means ‘definitions’. Also cf. *Topics* 101a38. Jonathan Barnes, *Aristotle’s Posterior Analytics*, pp. 102-3, takes ‘hypothesis’ to indicate that something is the case, while a definition does not “directly assert” that something is the case. Also see Alfonso Gomez-Lobo, “Aristotle’s Hypotheses and the Euclidean Postulates,” pp. 436-9; Blake Lander, “Definitions and Hypotheses in *Posterior Analytics* 72a19-25 and 76b35-77a4,” p. 318.

may define 'greatest positive integer' and then prove that the greatest positive integer does not exist. Or, perhaps, in demonstration in science, all the expressions used already have existential import, and the science presupposes that.<sup>102</sup> For a particular science does not justify its basic assumptions, such as the reality of its subject matter. Ontology does that. Thus the definitions appropriate and relative to a particular science will presuppose existence in a way that definitions strictly and without qualification do not. Only the latter assert existence explicitly.<sup>103</sup>

All this agrees with the general view of existence and predication that I am attributing to Aristotle. Affirmative statements, including definitions, do assert that their subjects exist. Predicates serve to specify this statement of being *per se* further. The ten categories classify those predicates. Being itself, *per se*, cannot be in any category: to assert this is to make the *determinatum*, 'is', into one of its determinants, into a 'P'. So to ask, 'to what category does being belong?' makes "a category mistake". Instead, being is that "from which and with reference to which" all the terms signifying real objects are said. [*Cat.* 1a12-3; *Metaph.* 1003a33-5]<sup>104</sup>

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<sup>102</sup> Michael Ferejohn, *The Origins of Aristotelian Science*, pp. 32-5.

<sup>103</sup> Michael Ferejohn, *The Origins of Aristotelian Science*, pp. 40-1.

<sup>104</sup> Simplicius, *In Cat.* 221,3-8.



## CHAPTER SIX

### TYPES OF PREDICATION

In this chapter I shall continue to investigate how compatible the aspect theory of predication is with Aristotle's logical theory. Most of the features dealt with in this chapter may be found in *Categories* 2, where Aristotle develops his ontological square. In the previous chapter, I have argued that this is no coincidence, and that the aspect theory provides some informative perspectives on the nature of the categories. I shall close with an account of the significance of Aristotle's doctrine of unnatural predication.

#### *Accidental and Essential Predication*

In accordance with the ontological square, Aristotle divides predications into the essential and the accidental.<sup>1</sup> There he says that beings are said of (λέγεται κατά<sup>2</sup>) a subject, when both their name and definition are predicated of it. Beings are in a subject when their definition is not predicated of the subject, although their names, strictly speaking, expressions derivative from their names, may be predicated of the subject. Aristotle describes being in a subject as "what, not belonging to something as a part, cannot exist separately from that in which it is." [1a24-5] Here 'part' seems to indicate a part constitutive of the essence of something. [*Metaph.* 1022a32; Ammonius, in *Cat.* 26,26-27,8] Thus what is in a subject is not contained in its definition. In contrast, what is said of a subject, as its definition is predicated truly of it, is contained in its definition. By 'contained' I mean both those items explicitly signified by and stated in the definition and those entailed by the definition. [*Int.* 21a17-8]

There is a problem with what is both in a subject and said of a subject. For these two conditions conflict: its definition is and is not predicated of the subject. But note the example that Aristotle gives for this type: knowledge is *in* the soul, and is *said of* grammar. The 'said of' and 'in' relations

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<sup>1</sup> J. M. E. Moravcsik, "Predication in Aristotle," pp. 90-1, denies that Aristotle is distinguishing accidental from essential predication in *Categories* 2. James Duerlinger, "Predication and Inherence in Aristotle's *Categories*," p. 181, denies that.

<sup>2</sup> Sometimes Aristotle will use 'κατηγορηται κατα' also to signify the essential, 'said of' relation. Cf. J. L. Ackrill, *Aristotle's Categories and De Interpretatione*, p. 75.

do not hold in respect of the same thing. ‘Knowledge’ is not said of the soul—at best only an expression paronymous with ‘knowledge’ is said of it. For it is not true to predicate ‘knowledge’ of ‘soul’ (\*‘the soul is knowledge’). However, a paronym of knowledge, say, ‘able to know’ (ἐπιστητή), can be predicated of the soul. As I shall discuss further in Chapter Eight, it looks as if the definition of this paronym can be predicated of the soul also.

Aristotle’s more usual terms for the “essential” and the “accidental” relations of ‘being said of’ and ‘being in’ are ‘καθ’ αὐτό’ and ‘κατὰ συμβεβηκός’.<sup>3</sup> I have been translating these as ‘*per se*’ and ‘*per accidens*’. I have claimed that Aristotle has his own technical meanings for these terms, in addition to using the more common, philosophical meanings for them. Thus ‘καθ’ αὐτό’ has the usual meaning of ‘by itself alone’, and we have seen Aristotle marking that use in his lexicon when speaking of ‘being *per se*’, and using it when he speaks of a verb *per se*, as opposed to its being in a sentence. In this sense too, Aristotle says that a man is said to be walking καθ’ αὐτό. [*Metaph.* 1017a29-30; cf. *Int.* 16a20; *Poet.* 1457a12; 1457a30] However, his own technical meaning looks much stricter, and I use ‘essential’ and ‘accidental’ in that sense.<sup>4</sup>

Aristotle distinguishes various technical sense of ‘καθ’ αὐτό’ in *Posterior Analytics* I.4. Some of these senses overlap with the distinctions made for ‘καθ’ αὐτό’ and ‘καθ’ ὃ’ in *Metaphysics* V.18. In the first, main sense, ‘S is P καθ’ αὐτό’ iff ‘P’ is essentially predicated of ‘S’; i.e., if ‘P’ is contained in the definition of ‘S’. [73a34-5] Aristotle takes ‘contained in’ generously, to include all that follows necessarily from the definition. Aristotle has a variant of this use, commonly translated as “the commensurately universal”, as it is based on his using ‘κατά’ (and ‘ἥ’) to describe a special sense of the universal (καθόλου). Here not only must ‘P’ be contained in the definition of ‘S’, but also ‘S’ must signify the primary subject for being P. For this to be so, being S and being P must occur on the same level of generality, so that the two terms are necessarily coextensive, as the examples in *Posterior Analytics* I.5 make clear. [73b26-9] Further, S must be the primary subject for P.<sup>5</sup>

In his second sense, ‘S is P καθ’ αὐτό’ iff ‘S’ is in the definition of ‘P’, and so, if we again construe being in a definition generously, ‘S is P καθ’ αὐτό’ iff ‘S’ is essentially predicated of ‘P’. [73a36-7] This second sense

<sup>3</sup> Alan Code, “Aristotle: Essence and Accident,” p. 417 n. 9, notes that Aristotle does not use the terminology but still is making the distinction between essential and accidental predication in *Categories* 2.

<sup>4</sup> Aristotle regularly marks off the general use from his technical use of a term; e.g., for ‘continuous’ at *Metaphysics* 1016a9-11. Cf. Alexander, in *Ar. Metaph.* 363,19-20.

<sup>5</sup> See Allan Bäck, *On Reduplication*, Chapter Two.

can be reduced to the first if made into a disjunctive predicate with all of its contraries. E.g., if ‘a number is even καθ’ αὐτό’ in the second sense, where a number must be even or odd, then it is true iff ‘a number is even or odd καθ’ αὐτό’ in the first sense. This second sense does do some work for Aristotle: e.g., in his discussion of snubness in *Metaphysics* VII, in his view of the male and the female, and in his critique of the Eleatic doctrine of being as the *apeiron* in *Physics* I.<sup>6</sup>

Aristotle distinguishes two other senses that resemble past usage more obviously. In the third sense, S is P καθ’ αὐτό if the predicate

is not said of some other subject, as what is walking, being something else, is walking, and what is white <is white>, whereas substance, and whatever signifies the singular, not being something else, is just what it is. [73b5-8]

What is said of some other subject Aristotle calls an accident. [73b9-10] Thus when the subject is in its own right it is καθ’ αὐτό; when it is in virtue of some other underlying subject it is κατὰ συμβεβηκός. This amounts to the distinction of being *per se* and being *per accidens* discussed in *Metaphysics* V.7.<sup>7</sup>

In the fourth sense, P belongs καθ’ αὐτό to S iff it “belongs to each thing on account of itself.” [73b10-1] This sense has causal features. For if the sky lightens while you are walking, the connection is accidental and not essential. [73b11-3] But if something is being sacrificed, it dies: this happens “in virtue of (κατὰ) the sacrifice because on account of being sacrificed.” [73b14-5] The causal connection holds not between the original subject ‘S’ and the predicate ‘P’ but between ‘P’ and the ‘M’ expression signifying the cause: something dies because it is sacrificed; what is sacrificed dies καθ’ αὐτό. The connection between M and S holds in every case (κατὰ παντός): for it belongs to each case, and the presence of the causal attribute suffices to bring about the presence of the attribute originally predicated.

All four technical senses refine the original Platonist meaning of ‘καθ’ αὐτό’, ‘by itself’: if S has P by itself, then P by itself is predicated of S. Then S and P have common natures: S is what it is to be P, or *vice versa*. Further, all four technical senses strictly concern things rather than words. As with the ontological square, Aristotle regularly speaks of essential and accidental predication thus. [*Int.* 17a38-40] However, in light of what I have claimed in the previous chapter about Aristotle’s protocol language, which claims to cut up reality at the joints, we can understand how Aristotle

<sup>6</sup> Philoponus, in *Phys.* 34,22-35,2.

<sup>7</sup> Mary Sommers, “Aristotle on Substance and Predication: A Medieval View,” pp. 78; 81.

can shift easily back and forth between things and the words signifying them.

For the most part, Aristotle uses the first sense, where P follows from the definition of S.<sup>8</sup> This sense focuses on “just what it is to be S”. Accordingly, Aristotle bases the difference between the essential and the accidental attributes of something on its definition. In this major sense of ‘essential’ (‘καθ’ αὐτό’) that Aristotle uses technically, an attribute is essential to a subject if it is contained in its definition.<sup>9</sup> A definition “contains”, in the sense stated above, its constituent parts, the parts of the definitions of those constituents, and whatever is inseparable from them. [*An. Po.* 73b34-5] In short, a predicate is essential if it follows from the definition of the subject. So the species, genera, and *differentiae*, as well as the *propria* or proper accidents, both proximate and remote, are essential, and belong necessarily, to the subject. The (common) accidental consists in all that is not implied by the definition. [*Top.* 102b5-7] These accidental attributes are separable from their objects, and so belong to them contingently. In short, a subject has its essential predicates as long as it exists, whereas the accidental predicates may come and go during its career.

Aristotle discusses the senses of ‘καθ’ αὐτό’ and ‘καθ’ ὅ’ (‘in virtue of the fact that’) also in *Metaphysics* V.18.<sup>10</sup> There Aristotle lists the various antecedents for ‘ὅ’ and ‘αὐτό’: the form, substance, essence, cause, or proximate subject for the attribute being considered. These generally agree with his technical sense of ‘καθ’ αὐτό’, and provide a classification of the objects in essential relations.

Although Aristotle defines the essential and the accidental in terms of the relation of an attribute to the definition of the thing, he routinely uses two other characteristics to distinguish them. The essential holds always and necessarily of the subject, while the accidental need not hold always, but temporarily and contingently. I find it significant, although not especially relevant here, that Aristotle keeps the notions of modality, temporality, and essentiality separate, when it would appear to be so easy for him to reduce one to the other.

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<sup>8</sup> James Duerlinger, “Predication and Inherence in Aristotle’s Categories, p. 185, distinguishes four different senses of ‘x is in y’, and, pp. 190-1, two different senses of ‘x is predicated [said] of y’. Yet, although these distinctions do follow Aristotle’s discussion, Aristotle shows no indication of recognizing these differences as having logical significance: i.e., he does not state logical rules for each type distinguished. So too, although I have described various types of essential predication recognized by Aristotle, I do not claim that Aristotle takes them all to have equal logical import.

<sup>9</sup> Here ‘definition’ (‘τί ἐστιν’) applies to items in all categories. Cf. Michael Ferejohn, *The Origins of Aristotelian Science*, pp. 89-91.

<sup>10</sup> See Allan Bäck, *On Reduplication*, Chapter Two, for a full analysis of this chapter.

At times, Aristotle is willing to recognize some disorder in nature, and so will soften the requirement of necessity and permanence to what holds for the most part. [*An. Pr.* 32b4-8; *An. Po.* 96a10; *Top.* 112b1-5; *Metaph.* 1026b27-33]<sup>11</sup> So he says that an accident is what belongs to something not by necessity nor for the most part. [*Metaph.* 1025a15] In contrast, the essential belongs always, and necessarily or at least for the most part. [1026b27-30] E.g., aging in hairy mammals for the most part, but not always, produces graying of the hair. Is then graying essential to aging? It would be, according to this definition. But elsewhere Aristotle says that such attributes that belong only for the most part, belong possibly and not necessarily, although they do belong naturally. [*An. Pr.* 32b4-8] But then attributes that hold of a subject for the most part would be accidents.

Let me just remark that there do arise problematic cases, where it is not clear whether Aristotle would regard a predication as accidental or essential. I am inclined to view Aristotle's attitude here as mostly pragmatic and empirical. Often the phenomena, whether it be due to monstrosities (defects) or tragic accidents, or to inaccuracies in our observations, do not give regularities without exception. If Aristotle wants to be able to recognize any essential attributes in the natural world at all, he had better settle for attributes that belong merely normally and not inevitably. Like modern scientists, Aristotle wants universal laws based upon induction or at least upon confirmation from singulars. So he takes what he can get. Still, as this issue does not bear much on my concerns, I shall avoid it, and stick to the clearer cases.

However, *propria* and *differentiae* deserve special comment. For Aristotle takes these to be predicated essentially of a substantial subject, but still takes them to signify items in accidental categories. In the previous chapter, I have suggested that Aristotle has no inconsistency here: the distinction of essential and accidental predication is independent of the distinction of substance and accident. Recall that Aristotle says that items in all categories have being *per se* (καθ'αυτό'), even though most are accidents. Just as those that have being *per se* can be signified by (derivative) expressions predicated accidentally of a substantial subject, so too those that appear in essential predication can be accidents of those subjects.<sup>12</sup>

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<sup>11</sup> Mario Mignucci, "ὥς ἐπὶ τὸ πολὺ et nécessaire dans la conception aristotélicienne de la science." Michael Winter, "Aristotle, *hos epi to polu* Relations, and a Demonstrative Science of Ethics," surveys various interpretations of 'ἐπὶ τὸ πολὺ' and in effect sides with Mignucci.

<sup>12</sup> Accordingly, Alexander, in *Top.* 133,11-2, distinguishes accidents simply and *secundum quid*.

According to the aspect theory of predication, we can see why Aristotle would find the division between the essential and the accidental so fundamental, in logic as well as in ontology. In the structure, 'S is existent as a P', the predicate, 'P', determines the mode of existence of the subject. Being *per se* is more general than essential predication because it allows for both essential and accidental predication. Still, for an accidental predication to be said to be *per se* requires an essential predication, of a different predicate, of the same subject. E.g., for S to be white *per se* requires that S be a substance (a body having a surface) and have predicates from the category of substance.

In contrast, accidental predicates, although they determine the way in which the subject exists during a stretch of time, do not determine the way in which the subject must exist in order to be *simpliciter*. To repeat, accidental predication is not *per accidens* predication, i.e., does not make a statement of being *per accidens*. Rather it is a type of *per se* predication, making a statement of existence. For Aristotle requires that the subject exists for it to have accidental predicates. Thus, 'Socrates is healthy' requires that Socrates exist *per se* just as much as 'Socrates is an animal' does.

Now, if every affirmative statement asserts the existence of its subject, the predicates that would specify and determine that existence most accurately would be those that must apply to the subject always and necessarily. Like his predecessors, Aristotle finds the most scientific statements, with the highest degree of truth, to be those that hold always.<sup>13</sup> As a result, Aristotle turns his attention almost entirely to essential attributes in his theory of scientific demonstration. [*An. Po.* 75a18-20] He dismisses the being or existence of accidents contemptuously. At best, although not evident in themselves, accidents often are most familiar to us. [*Metaph.* 1029b9-12] An accidental attribute does not last long enough to be an object of knowledge; an accidental predicate is nearly a mere name, worthy only of sophists' interests. [*Metaph.* 1026b13-4]

Nevertheless Aristotle does not reject accidents in every sense. Primarily he is rejecting those that are *per accidens*. Next, he relegates beings *per se* that are in accidental categories that are predicated accidentally to secondary status. For they do not persist in their subjects. Aristotle keeps the accidents that are predicated essentially to the end. These are the *per se* accidents. After all, the *differentiae* and *propria* are in accidental categories (if Aristotle did not change his mind).

In the strictest sense, what has being *per se* for Aristotle exists permanently in the category of substance. Furthermore, its causal constituents have a priority over them. In this way, the sempiternal, incorporeal sub-

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<sup>13</sup> *Metaphysics* 1039b31-1040a2.

stances have primacy for being substances, while their primary causal constituents, their forms or essences, have primacy for being *per se*.<sup>14</sup> Accordingly Aristotle has a problem with the status of *differentiae* especially, as both the Aristotelian tradition and my interpretation attest.

### *Singular and Universal Predication*

In *On Interpretation* 7, Aristotle speaks of “objects”, or “states of affairs”,<sup>15</sup> (πράγματα), and divides them into the universal (καθόλου) and the singular (καθ’ ἑκάστων). Aristotle says that a universal is what is naturally predicated of many and a particular is what is not naturally predicated of many. [*Int.* 17a39-40] So too, Aristotle says, sometimes something is asserted to belong to something universal, while other times it is asserted to belong to something singular. [17b1-3] Aristotle makes the same division elsewhere, but says “beings” and not “objects”. [*An. Pr.* 43a25-32] There he says,

some beings are such as to be predicated of nothing else truly (like Cleon and Callias and the singular and the perceptible), while others are predicated of these (for each of these is both man and animal). [43a25-9]

He speaks of their “naturally” being predicated of many or of one because it may happen that a universal, like ‘sun’, has only one instance, and because in ordinary speech a singular term is said of many: many people have been called “Socrates”. I shall return to this sense of ‘natural predication’ at the end of this chapter.

One problem with this distinction is that Aristotle appears to be speaking of objects being predicated. Usually “objects” signify real things, and not expressions. Still, I think that Aristotle is not saying that real things can be predicated in a statement. What he says, strictly speaking, is that, as

<sup>14</sup> Proclus, *Elements of Theology*, §22., p. 26,1-15. Cf. Allan Bäck. “What is Being *Qua* Being?”

<sup>15</sup> Gabriel Nuchelmans, *Theories of the Proposition*, pp. 33-5 and L. M. De Rijk, “The Anatomy of the Proposition,” p. 37, prefer this translation with some truth, as Aristotle does deal with things insofar as we understand them. Yet it does not sound right to call Cleon “a state of affairs”. See Richard Gaskin, “Simplicius on the Meaning of Sentences,” p. 43 & n. 7. By ‘object’ I do not mean what Gaskin, p. 56, seems to mean, “the object Socrates (just as such),” but an object with a real, objective structure. ‘States of affairs’ sound too much like the modern propositional entities. Cf. Peter Geach, *Logic Matters*, p. 21.

L. M. De Rijk, “On Aristotle’s Semantics in *De Interpretatione*,” p. 119, goes on to say that ‘πράγμα’ names “... ‘things’ (whether or not actually existent) in so far as they are conceived of and referred to be expressions.” i.e., “thing or state of affairs as conceived of”. I take ‘object’ here to denote the substantial thing with all of its attributes, also known as ‘a state of affairs’. So this difference matters little.

some objects are universal and others individual, the statements making assertions about them will also have this difference. That objects are said to be predicated of a subject is to be construed in the same way that I explained Aristotle's remark that some beings are said of a subject in *Categories* 2. There Aristotle distinguishes substance and accident, universal and singular, but has forced the same structure onto his technical protocol Greek. The language reflects the ontology.

Consequently, the "things" that Aristotle allows to be universal or singular seem to be names and verbs signifying items in the categories in a simple or in a complex way. In this way, an expressions like 'every man' or 'some man' can be a subject, although it does not signify an item in the categories directly. For it does not name a singular or a universal substance. Still 'every man' is neither singular nor universal, strictly speaking. For it is not naturally predicated, either of many or of one. Indeed Aristotle says

For 'every' does not signify the universal, but that [it is] universal...So 'every' or 'no' additionally signifies nothing else than that the affirmation or denial of the name [is] universal. [20a9-15]<sup>16</sup>

So Aristotle means to be talking about statements and their parts when he speaks of something being asserted of a universal or of a singular. After all he does proceed to give instances of types of statements. Aristotle says that the subject of a statement can be universal or singular. He accepts a wide variety of types of subject terms.<sup>17</sup> In addition to proper names like 'Socrates', in his logic he allows for expressions having the form 'some S', 'every S', or 'S'.

The last Aristotle calls a universal expression taken indefinitely. A statement having such a subject still has a universal predicated of a universal "but not universally." [17b7] In practice, this means that no universally quantifying expression is present modifying the subject, as in 'no man' or 'every man'. Sometimes such a subject term signifies a universal species or genus, so as to produce an indefinite statement like 'dog is animal' or 'the whale is a mammal'.

E.g., animal is predicated of man, and so then also of some men—for if of no man, then not of man in general. [*Cat.* 2a36-2b1]

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<sup>16</sup> Here 'additionally signify' seems not to imply the presence of two significations, or, perhaps, the complex, 'every animal', makes two significations.

<sup>17</sup> Lynn Rose, *Aristotle's Syllogistic*, p. 15: "...that the formal relation of predication is basic, and that quantity, quality, and modality are simply varieties or types of predication that may be added on once the basic relation has been given."



For as primary substances hold in relation to all the others, so too species and genera of primary substances hold in relation to all remaining things: for you say that some man is grammatical, so then you will say too that man and animal are grammatical. Likewise for all the others too. [*Cat.* 3a1-6]<sup>18</sup>

Today such indefinite universals are called generic descriptions. When making a predication of genus or species, such statements also imply that all the individuals under the species also have that predicate. Aristotle does not think that indefinite statements have a different logical syntax. Rather, he recognizes a semantic difference. The other subjects mentioned exist independently, whereas the existence of the indefinite subject depends on the existence of its instances:

So if there were not primary substances it would be impossible for any of the others to exist. [2b5-6]

For the species or genus (dog) to exist, to be *per se*, requires that some of its individuals (dogs) exist. In contrast, a statement about every dog or some dog existing now signifies the individuals directly and so does not have this dependence. As it lacks existence in its own right (*καθ' αὐτό*) might explain why Aristotle does not use this type of indefinite statement in his syllogistic (where as we shall see he needs the concrete terms to be taken concretely). [*An. Pr.* 26a28-30] Or, perhaps, he does this merely because the particular reading is weaker than the universal one.

In any case, other times, especially in his syllogistic, Aristotle takes the indefinite statement to amount to a particular one: 'some dog (a dog) is an animal'.<sup>19</sup> In general, Aristotle allows the indefinite statement to be taken in either way.<sup>20</sup> Accordingly, he views such statements as "indefinite" in the sense of being ambiguous between the universal and the particular. True, in the syllogistic, Aristotle treats the indefinite and the particular statement as equivalent. Still he does at times use indefinite statements with universal force. [*De An.* 424b22; *Ph.* 200b32]<sup>21</sup> Indeed, in stating the an-

<sup>18</sup> Kwame Gyekye, "Aristotle and a Modern Notion of Predication," holds that Aristotle does not use the same predication for the predication of a singular and for a universal subject. But Aristotle clearly does. Cf. George Englebretsen, "Aristotle on the Subject of Predication." See too Chapter Five, n. 44.

<sup>19</sup> For a discussion of the relation between these two types of statements, see Allan Bäck, "Philoponus on the Fallacy of Accident."

<sup>20</sup> Against George Englebretsen, "Predication: Old and New," p. 117. Cf. Ignacio Angelelli, "Predication: Old and New," p. 122; James Duerlinger, "Predication and Inherence in Aristotle's *Categories*," pp. 191-2.

<sup>21</sup> Cf. Ammonius, in *De Int.* 112-12-9.

tepredicamental rule, he uses indefinite statements. [*Cat.* 1b12-4] Aristotle speaks of a species being predicated of a genus, and when he does so he uses indefinite statements. [*Top.* 109b1-7] Such predications do not reduce to universal or particular statements.

These definitions of universal and singular conform to the tripartite analysis of the statement. For they suppose that a statement is composed of two terms related copulatively by 'belongs to' or 'predicated of'.<sup>22</sup> Still, they do not thereby exclude the bipartite, name-verb analysis. Just as 'every' specifies something about the affirmation or denial of the name that is the subject, so too the predicate complement ('P') signifies something about how the subject exists now. Above I have noted that Aristotle takes some care to preserve and use the name-verb structure in statements, especially outside of the syllogistic. Thus, when Aristotle constructs squares of opposition for universal and particular statements, he continues to use the name-verb construction. So too, when speaking of essential predication in non-substantial categories, he uses that structure for, e.g., 'whiteness is a color' (literally: 'whiteness colorizes (τὴν λευκότητα κεχρῶσθαι)'). [*Top.* 109b3-4] This may pervert ordinary language, but Aristotle does that.

Aristotle does not allow universals taken universally ('every dog') to be the predicate. [17b12-6; *Pr An* I.41; 43b17-21]<sup>23</sup> It is less clear what Aristotle holds about the possibility of a singular expression being the predicate. Is he asserting that a singular may never be predicated of a subject, or that a singular may be predicated of a subject, but not of more than one subject?<sup>24</sup> As he makes clear in his doctrine of unnatural predication, Aristotle has a general aversion to the predication of singular terms. Yet this was common in ordinary use. Aristotle himself does predicate them occasionally without qualms: "Callias is Callias καθ' αὐτό" [*Metaph.* 1022a26-7]; "this man is your father" [*Soph. El.* 179a34-5]; "the soul of Socrates is Socrates" [*Metaph.* 1037a7-8] Moreover, Aristotle defined the singular only as what is not predicated of many [*Int.* 17a39-40] or as what is not predicated of anything else [*An. Pr.* 43a25-9]. Also he asserts that Socrates is the same as

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<sup>22</sup> Jonathan Barnes, "Property in Aristotle's *Topics*," p. 148: "Aristotelian subjects and Aristotelian predicates are like modern predicates."

<sup>23</sup> Ammonius, in *De Int.* 102, 19ff., considers propositions with a quantified predicate at great length. He notes that most of them, with the exception of the one form that Aristotle cites, 'S is every P' (which, if not ill formed, he says, is still always false) are true and well formed. When Aristotle seems to use a quantified predicate, Ammonius says that he is using it in an inflected case and not directly: 'receptive of every science' but not 'every animal'.

Aristotle might allow a quantified singular term as subject. *Prior Analytics* 47b28; Plato, *Philebus* 14d; [ps-] Alexander, in *Metaph.* 514,6. Cf. Allan Back, "Philoponus on the Fallacy of Accident;" Fred Sommers, *The Logic of Natural Language*, pp. 18; 115.

<sup>24</sup> Walter Cavini, "La negazione di frase nella logica Greca," p. 44.

being Socrates. [*Metaph.* 1032a8] All this does not amount to saying that a singular is not predicated of a singular, namely itself.

Still, the very term ‘καθόλου’ suggests that Aristotle views a universal fundamentally as something predicated. For it means literally ‘of the whole’, where the ‘of’ (‘κατά’) is Aristotle’s usual preposition in the phrase ‘being said of’. In contrast ‘καθ’ ἕκαστον’ does not suggest that, as it means ‘in virtue of each’. “Ἐκαστος” functions much like the demonstrative pronoun, and so has the sense of being a separate item in a series. So ‘in virtue of each’ has the sense of something like ‘in virtue of this one and that one by itself’. As a result ‘καθ’ ἕκαστον’ suggests being a subject and not being a predicate.

On the other hand, note that, according to Aristotle’s definition for ‘universal’, expressions like the indefinite ‘(a) man’ will be universal and not singular, but only when taken generically, to signify the species, not when taken particularly, as equivalent to ‘some man’. For the species is predicated of many individual subjects. However, particular expressions like ‘some man’ will not be universal predicates, given that Aristotle admits statements of the form ‘S is some P’ as well formed. But may not, e.g., ‘some animal’, be predicated of many? For Socrates, Xanthippe, et al. each is some animal. Aristotle would deny that ‘some animal’ is a universal, since such statements have the same ambiguity that Aristotle attributes to statements like ‘he is sitting’, used about two different people. For in that case Aristotle holds that not one, but two, statements are made, although the linguistic sentence remains the same. If, then, Aristotle allows statements of the form ‘S is some P’, or even ‘S is a P’, he allows the predication of singular terms.

Indeed Aristotle calls ‘every dog’ a universal taken universally, literally, “as of a whole.” Here the predicate holds of the whole of the subject. In contrast, a particular expression taken as subject, as in ‘some dog barks’, has the predicate holding only for part of the subject (‘dog’).<sup>25</sup> Aristotle calls such expressions those holding in part (ἐν μέρει [25a5]) or in virtue of a part (κατὰ μέρος).<sup>26</sup> By parity, we might speculate, a singular subject would have to have the predicate hold just of the subject.

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<sup>25</sup> Mario Mignucci, “Aristotle’s Theory of Predication,” p. 11, accordingly sees the individual-universal relation as a part-whole relation. He goes so far, p. 13, as to assert that for Aristotle the predication relation is just the part-whole relation. This works only so long as we admit that the basic form is *secundum adiacens*, ‘S is’, that each additional predicate “cuts off a *part* of being”. See Chapter Nine.

<sup>26</sup> This way of speaking recalls Plato: instead of speaking of the individuals directly, Aristotle speaks of them indirectly through their constituting wholes or parts—of what?—of “species”, also known as “forms” (εἶδη).

So let me first propose the first, weaker interpretation, according to which a singular may be predicated, in Aristotle's technical language, of only one subject. When I discuss unnatural predication in the next section, I shall pursue the stronger interpretation, where Aristotle does not allow singulars to be predicated at all in his protocol language.

On the weaker interpretation, Aristotle distinguishes singular and universal things existing *in re*, and then proceeds to classify statements in terms of this ontological distinction. A universal expression, generally a name or a verb (in the logical sense), is one that is naturally predicated of many subjects, while a singular one is naturally predicated of at most one subject. Aristotle finds it more natural also for singulars to serve as subjects than as predicates. Yet he does allow singular terms to be predicated.

Note that Aristotle's definition of 'singular' works only if we consider subjects not to be any old grammatical expressions. E.g., consider 'the one standing up is Socrates' and 'the one drinking hemlock is Socrates'. Here 'Socrates' is the predicate of two different subject expressions. Why then is not 'Socrates' predicated of many? Perhaps because, although there are many subject expressions, there is only one subject. Is then the subject what the subject expression signifies: the objects? This would create difficulties too: for Aristotle takes 'every swan' in 'every swan is white' to be the subject. [*An. Pr.* 26a38-9; *Int.* 19b17-9] Yet he denies that there is a real object, a single entity, named 'every swan'. Instead, take the subject of a statement to be a name, signifying objects. I have already shown that for Aristotle names are not merely verbal expressions, and that different verbal expressions, with quite different verbal definitions or meanings, may express the same name.

This interpretation fits with Aristotle's view that statements provide a symbolic representation, in writing, speech, or thought, of real objects and their attributes. As he says at the beginning of *On Interpretation*, names are primarily in the mental language, which seems to have little redundancy and which seems, if we but think clearly, to have a structure reflecting reality. Indeed, the representation is supposed to be isomorphic with the structure of being. I have argued that this isomorphism does not reflect a naïve projection of the structure of the Greek language onto the world, but rather requires a sophisticated regimentation of the structure of the Greek language according to Aristotle's ontology. Aristotle ignores linguistic expressions and instead concentrates on names, verbs, and their qualifiers. Aristotle recognizes significative parts of statements accordingly. So he constructs a technical protocol language. Once he has this, it would come naturally to him to talk about names and verbs, or about the objects that they signify, indifferently. Likewise, in modern symbolic logics, once the constants and predicate functions are defined, so as to make 'Ps', it does not make much difference, in practice albeit not in theory, even if we are

acutely aware of use-mention distinctions, to read 'Ps' as being the formula or statement itself, or as being the state of affairs, s's belonging to P, that that statement represents. For the domain and the formulae have the same structure, and once more, not by coincidence.

### *Comparison with Modern Logic*

**Singular and Universal Predication** One well known, major difference between Aristotelian logic and modern classical (Russell-Frege) logic lies in their respective treatment of singular and universal predication. Consider statements, one with a singular term as subject term, and the other with a universal term: e.g., 'Socrates is a man' and 'every man is an animal'. In Aristotle's theory, these two have the same logical structure. In modern logic they have quite different structures: the first asserts that an individual has the property of being human, as in 'Hs'; the latter asserts that for every individual, if that individual has the property of being human, then it also has the property of being animal, as in ' $(x)(Hx \supset Ax)$ '. In the latter, the universal proposition makes no assertion about the existence of the subject: as usually construed, ' $(x)(Hx \supset Ax)$ ' is true if no humans exist. But a singular affirmation does require its subject to exist (in 'Socrates is human', 'Hs', 's' must name an element of the domain). So in modern logic 'is' in these two statements functions quite differently and is ambiguous, between 'falling under' and 'being ordered under', as Frege puts it.<sup>27</sup> In contrast, in Aristotle, the predication relation remains the same.<sup>28</sup>

Again, modern logic takes existential statements to have a radically different structure than the predicative ones: 'a human being exists' has only one term, human, existentially quantified: ' $(\exists x)Hx$ '. It takes 'Socrates exists' to be ill-formed ( $*(\exists x)s$ '), or makes up an artificial function, like defining 'Sx' as 'x Socratizes', and then quantifies over it: ' $(\exists x)Sx$ '.

In contrast, Aristotle shows no indication of breaking up existential and predicative, or singular and universal statements into different logical types.<sup>29</sup> So too for the aspect theory. It gains support here over the copulative interpretation of Aristotle. For it makes the predication remain always the same, regardless of whether the statement is of *secundum adiacens* or of

<sup>27</sup> Ignacio Angelelli, *Studies on Gottlob Frege and Traditional Philosophy*.

<sup>28</sup> Nicholas Rescher, "The Equivocality of Existence," pp. 58-9.

<sup>29</sup> "It is a gross misrepresentation of Aristotle to say that he would use...the quantifiers of modern mathematical logic." George Englebretsen, "Aristotle on the Subject of Predication," p. 615. Peter Geach, *Three Philosophers*, pp. 76, 88-90, agrees, but claims that Aquinas makes the distinction through holding that a subject term refers to a thing while a predicate refers to a nature.

*tertium adiacens*, and whether it be singular or universal. In contrast, the copulative interpretation makes it not remain the same, for ‘is’ shifts its meaning between making an existence claim and performing a merely copulative between subject and predicate term. That would suggest that, even internally, Aristotle’s theory of predication is ambiguous. For, unlike modern logic, Aristotle does not recognize explicitly the different logical types. Rather as in the antepredicamental rule, he runs them together. [*Cat.* 1b10-5]<sup>30</sup> The modern viewpoint finds proof for the failure of Aristotle’s logic in his sanctioning the inference of subalternation from universal to particular affirmative statements, and in his preoccupation with the inference form, ‘S is P; therefore S is’. However, these criticisms of Aristotle’s logic miss the mark. They do attack well the copulative theory that has become the dominant interpretation of Aristotelian logic. But they do not attack Aristotle’s logic as interpreted by the aspect theory. I am not saying that Aristotle’s theory is better than the modern. (I shall address that issue somewhat in my concluding chapter.) Still, note that the aspect interpretation makes Aristotle’s views at least internally respectable, unlike the copulative approach, as it does not saddle the Aristotelian tradition with harboring unrecognized ambiguities and sanctioning inferences with insufficient warrant.

Aristotle’s position is even more foreign to modern logic if we consider indefinite statements. Although Aristotle ignores indefinite statements in his syllogistic, by reducing them to particular statements, he does seem fond of them when he discusses the relation of species and genera. So he makes statements like ‘man is animal’, where the latter means that ‘animal’ is predicated of the species man. That sort of statement in modern logic would be construed as a predication still concerning the relation of predicates of the singulars (‘for every x, if x is a man, then x is an animal’) or as a higher-order predication (‘being man is ordered under being animal’). In contrast, Aristotle’s predication of a species of a genus seems to predicate an attribute of an individual of sorts, sc., a secondary substance.

Again, because Aristotle does not radically separate singular and universal statements as belongs to two logical types of predication, he is apt to mix their features from the modern viewpoint. The most striking instance of this is when he quantifies over singular terms, even over proper names, if not clearly, at least apparently so.<sup>31</sup> So he says that ‘Coriscus is musical’ is ambiguous, because there is more than one Coriscus. [*Soph. El.* 175b19-23] Again, he says that it is false that “every thinkable Aristomenes always is,

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<sup>30</sup> See Chapter Eight.

<sup>31</sup> The Greek commentators took him to be doing so, and clearly offer such examples. See Allan Bäck, “Philoponus on the Fallacy of Accident,” pp. 132-5.

since Aristomenes is perishable.” [*An. Pr.* 47b28-9] Indeed, it is well formed in Greek to attach the particular quantifier, ‘some’, to a proper name anyway: “some Socrates is a busybody...” [*Ap.* 23d1; cf. *Phlb.* 14d] These considerations are not decisive but do support the claim that Aristotle sees no radical difference of logical form between singular and universal predication.

The aspect theory provides a simple way to understand Aristotle’s distinction of the singular and the universal. We take the basic form of statements: ‘S is’, and then consider statements in which the subject terms, the S terms, appear as the P terms. When there is at most one subject of which the P term may be predicated truly, then that is singular; otherwise it is universal. This test works only if we construe the subject and predicate terms as names and verbs not in the grammatical sense but in the logical sense discussed above.

One feature of the aspect theory in relation to universal statements deserves comment. According to the aspect theory, a statement of the form, ‘every S is P’, will assert ‘every S is existent as a P’, which also entails ‘every S is existent’. But what might that mean? Indeed, to say, e.g., ‘every dog is existent’ sounds bizarre. Aristotle generally does not use universal statements of *secundum adiacens*. But he does indicate how they should be understood. He offers some options: ‘every S’ can describe whatever objects are presently signified by ‘S’ in a typical or an unusual way (ἀπλῶς; κατὰ χρόνον) [*An. Pr.* 34b7-11], or whatever objects that have ever been signified by ‘S’ (κατὰ παντός). [*An. Po.* 74b28-32; cf. *An. Pr.* 1.33] He generally takes the latter, as scientific statements have to hold always. Yet, as they still deal with primary substances in time, they then will have to hold of all those objects ever signified by ‘S’ at some particular times.

Aristotle has somewhat of an embarrassment here. For ‘every S is P’ holds that every S is existent as a P, and Aristotle has held that verbs signify only present time. But then how can ‘every S’ hold of objects that were or will be S? This problem does not arise from the aspect theory, but from Aristotle’s theory of science, and might have impelled him to say that only species and genera are objects of science. For these exist at all points of time for Aristotle.

**Ambiguity of ‘is’** As mentioned in the Introduction, G. E. L. Owen has argued that confusion arises if a single notion of ‘is’ be taken to handle both singular and universal predication. He wishes to distinguish a predicative sense of ‘is’ (“is\*”), being present in the world as a thing of a certain sort,

from a quantificational sense ("is\*\*\*"), that is parasitic on all predicates.<sup>32</sup> The contradictions arise when universal terms, used to refer to universals, are used as subjects in denials of existence. For the predicational sense assumes that the subject has existence at some time: 'Socrates is not' means 'Socrates is no more, but once was'. But then, Owen claims, it is absurd to say of a kind like the goat-stag that it is not, since that statement would presuppose the existence of goat-stags at some time.<sup>33</sup> So, Owen concludes, we must mark a third sense of 'is'.<sup>34</sup>

On this view, the aspect theory, and Aristotle if he accepts it, would be hopelessly confused. For it postulates a single sense of 'is'. Still, Owen himself hints that an account of focal meaning might offer a way out, although he says that Aristotle did not follow it up.<sup>35</sup> Maybe the aspect theory is the way out, and Aristotle does follow it.

I see no reason for importing a third sense of 'is', to account for denials of types. The negation in 'S is not' may be taken to be a denial of the predication of 'is' of 'S'—and here 'S' has existential import—or of the denial of the entire statement—and here 'S' does not have existential import.<sup>36</sup> Aristotle himself makes this distinction when he contrasts indefinite verbs, which may be said equally of what is and what is not, with negations of verbs, which may be said only of what is. So Aristotle and the aspect theory handle such denials well.

Aristotle does recognize differences between singular and universal statements, sc., those whose subject term is or is not universal. On Aristotle's view, universal terms signify species and genera in one of the categories.<sup>37</sup> Universal terms in the category of substance signify secondary substances that have their being as being "said of" primary substances, and not as being independently in themselves like Plato's Forms. They constitute general characteristics of the very being of singulars that depend upon their existence.

On these lines, we can give an account of the various sorts of universal statements recognized by Aristotle. 'Some man is' asserts that at least one present instance of man, a primary substance having 'man' as a constituent, has being *per se*. 'Every man is' asserts that every present instance of 'man' has being *per se*. The indefinite statement 'man is', taken as a predi-

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<sup>32</sup> G. E. L. Owen, 'Aristotle on the Snares of Ontology,' p. 85. On 'is\*' and 'is\*\*\*' cf. John Cook Wilson, *Statement and Inference*, Vol. I, pp. 186-7.

<sup>33</sup> G. E. L. Owen, 'Aristotle on the Snares of Ontology,' p. 89.

<sup>34</sup> G. E. L. Owen, 'Aristotle on the Snares of Ontology,' p. 90.

<sup>35</sup> G. E. L. Owen, 'Aristotle on the Snares of Ontology,' p. 95.

<sup>36</sup> See Chapter Seven.

<sup>37</sup> See *Topics* 109b1-7 for examples in accidental categories.



cation of ‘is’ of the species, asserts that man has being *per se* through its instances. As Aristotle recognizes other types of being like being *per accidens*, the claim of existence has content.

The same account holds when a universal accident is the subject. But we must distinguish which paronym is used. If the base form, signifying an item in an accidental category, like ‘whiteness’, then the account just given holds, with the addition that the being *per se* of the subject requires that it also be “in” a subject that is a substance, and ultimately in a primary substance. If the derivative form is used, then the account holds with the following complications: 1) the paronym must be used: not ‘whiteness’ but ‘white’ taken concretely (to mean ‘a thing having whiteness’) 2) its having being *per se* presupposes, as above, that the accident proper (whiteness) is “in” a subject that is a substance, ultimately a primary one.<sup>38</sup>

To give this view some plausibility, let me give an analogy. Fructose is something that naturally is not found by itself. Let us suppose that there is no artificially produced fructose ever. Still we could claim: fructose is/exists. It exists as part of what this apple, that raspberry is. Now also that apple exists/is. The fructose does not exist over and above that apple. Both are existent but in different ways.

A universal term, designating a species or genus, functions much like a mass term like ‘fructose’. Each such term has discrete instances: the species man is instanced in Socrates, in Xanthippe, in Judas. It “exists” at many places at once, unlike the “existence” of the singulars. Further, the fructose must “exist in” a piece of fruit.

**Identity** Despite modern enthusiasts, Aristotle does not make much of identity statements. He does consider statements involving types of sameness. I shall comment here on how these statements fit into the aspect theory of predication.

I have pointed out that at times Aristotle allows a singular name to be predicated of itself. He requires only that it not be predicated of many [*Int.* 17a40] nor of anything else [*An. Pr.* 43a26] So he admits self-predication, in the sense of having the expressions contained in the subject and the predicate signify the same item in a category.<sup>39</sup> This is the primary sense of numerical sameness, stronger than specific or generic sameness. [*Top.*

<sup>38</sup> The other case, where the derivative form is read abstractly, to signify not ‘the thing that is white’ but only ‘white’, cannot make a statement of being *per se*, as I have argued.

<sup>39</sup> Alan Code, “Aristotle: Essence and Accident,” p. 419, says, “It is a basic truth that each item is I-predicable [essentially] of itself...it is also a basic truth that no item is H-predicable [accidentally] of itself.” Code notes, n. 11, that Aristotle does not allow self-predication of singulars in *Categories* 2 but does so in the *Metaphysics* (VII.6 and 1022a25-7; cf. *Topics* 152b25). I agree that Aristotle does not allow an individual substance to be said be nor in a subject. Yet these are not the only types of predication.

151b28] Thus, in ‘this man is your father’, ‘this man’ and ‘your father’ signify the same individual substance. Accordingly Aristotle says that in cases of sameness in number we use two appellations (*προσηγορίαι*) of the same thing. [*Top.* 103a32-3]

What types of numerical sameness Aristotle recognizes depends upon what types of singular terms he allows. E.g., “Xanthippe” is the same as “risible” if that be construed as an individual: ‘this risible’ or at least ‘a risible’. For the sake of discussion I assume here the full range.

Aristotle recognizes degrees of numerical sameness. This strictest sense occurs when the two expressions are related as *definitum* and definition, as in ‘man is a rational animal’. [103a25-6] Weaker than that would be, in order: the predication of the definition of the individual substance (strictly: of the substance commensurately universal with it, and then with the substances under it more specifically until the individual substances are reached<sup>40</sup>), as in ‘Xanthippe is a rational animal’; the predication of the *proprium* of the substance (‘Xanthippe is (a) risible (thing)’); the predication of an accident of a substance (‘Xanthippe is (a) sitting (thing)’); the predication of an accident of another accident (‘the (one) sitting is your mother’). Aristotle could treat cases like ‘Socrates is this man’ and ‘this man is Socrates’ like the predication of definition and *definitum* as a thing is the same as its essence. [*Metaph.* VII.6]

Some cases of numerical sameness assert being *per accidens* and not being *per se*: sc., those that predicate an accident or substance of an accident.<sup>41</sup> As I shall discuss in Chapter Eight, such cases occasion the fallacy of accident. However, an accidental predication, like ‘Xanthippe is sitting’, does not.

Aristotle’s account of numerical sameness applies equally well to predications of abstract terms, such as names or Forms. To say that justice is courage is to say that justice is numerically the same as courage. [*Top.* 151b31-2] Yet, once again, Aristotle is not inclined to read statements like ‘pleasure is the good’ as identity statements but as predications. [*An. Pr.* I.40] Further, in line with his insistence on the primacy of individual substances, Aristotle insists that such truths depend on the truth of the correlative statement about the paronyms. Thus ‘justice is courage’ is true only if ‘the just things are the same as the brave things’. [151b31-3] However, the converse does not hold, both for statements of accidental predication and for those of being *per accidens* (‘all frogs live on Earth’; ‘every mother lives on Earth’), although it does hold for essential predication.

<sup>40</sup> This sequence holds for the remaining cases, but I shall omit continuing to state it.

<sup>41</sup> Cf. *Sophistical Refutations* 179a39-b2.

In discussing the *Sophist* I have claimed that Plato analyzes ‘justice is justice’ as ‘justice is the same as justice’. and ‘Socrates is just’ as ‘Socrates participates in justice’. Thus Plato holds that not all predications assert an identity. Aristotle might follow him here. Too, we saw problems with Plato’s view: for we can never say just what (ὅπερ) a thing is; the interweaving with Sameness always intervenes. So too Aristotle insists that a thing is identical with its essence, which states just what it is, without introducing a relation of sameness. Along these lines, I see no reason to claim that Aristotle takes all predications as identity statements. Rather, he seems to take ‘sameness’ like ‘similarity’ and ‘equality’ as a relation that things can have relative to each other. He could take all predications of singulars as statements of numerical sameness.<sup>42</sup> But he does not.

Much of the discussion of sameness, in Aristotle and in his commentators, would benefit from making a use-mention distinction. Take ‘Xanthippe is the same as her essence’. ‘Xanthippe is her essence’ is false taken as a predication of being *per se* or *per accidens*. Her essence is being mentioned. Here the relation of sameness forms part of the statement talking about her essence. If we use her essence, we have ‘Xanthippe is a rational animal’. Here Aristotle need not use an analysis of sameness as Plato did. Rather, Xanthippe exists as a rational animal; being a rational animal is just what she is.

The aspect theory can handle identity claims: ‘Socrates is Socrates’ becomes ‘Socrates exists as (identical to) Socrates’; ‘this man is Socrates’ becomes ‘this man exists as (the same as) Socrates’. Such statements are harmless but not too informative. We can see why Aristotle would not think that the identity relation has central importance in predication.

However, in his protocol language, Aristotle allows predication at best only of expressions signifying singulars in accidental categories (taken abstractly). He does not seem to allow the predication of singulars in the category of substance. Still his remarks on numerical sameness to offer a way of analyzing such singular statements as ‘the one drinking hemlock is Socrates’ without predicating a singular term: not ‘is Socrates’; rather take the predicate as either ‘the same as Socrates’ or, better, ‘being Socrates’ (sc., ‘the essence of Socrates’—suggested by the predicative position).<sup>43</sup> But Aristotle does not take this way. In his own scientific discourse, where

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<sup>42</sup> Cf. José M. Gamba, “El Razonamiento sofístico y la Teoría de los Predicables.”

<sup>43</sup> The recent theory of tropes has a lot of similarity to the aspect theory. See Daniel Devereux, “Inherence and Primary Substance in Aristotle’s *Categories*,” Ravi Sharma, “A New Defense of Tropes?” At *Categories* 3b15-6, Aristotle says that secondary substances signify a *ποτόν τι*, albeit in a sense different than a *quale*. Cf. Daniel Devereux, “Aristotle’s *Categories* 3b10-21,” p. 349.

he forces the language to match the ontology, generally he is inclined not to make such predications.

### *Unnatural Predication*

Aristotle himself is inclined to say that, strictly speaking, a singular (term), whether signifying an substance or an accident, cannot be predicated:

It is clear that some beings are naturally said of no beings. For nearly every perceptible is such as not to be predicated of anything except *per accidens* (κατὰ συμβεβηκός). For we say that the white [thing] is Socrates, and the one who is approaching is Callias. [*An. Pr.* 43a32-3; cf. *Soph. El.* 179a39-b2; Ammonius, in *De Int.* 53,22-8]

Aristotle admits that singular (terms) are predicated, but must be then “predicated *per accidens*”.<sup>44</sup> He gives examples like ‘the white (thing) is Socrates’, where a name signifying a primary substance is predicated of a paronymous expression derived from the name of a quality, ‘whiteness’.<sup>45</sup> The examples suggest accidental predication. But consider ‘that man approaching is Socrates’. Aristotle does not introduce an ‘is’ of identity or speak of sameness.<sup>46</sup> Here too ‘Socrates’ is predicated of ‘that man’ “accidentally”. But “‘Socrates’ names a primary substance. So this predication looks not merely non-accidental, but even essential.”<sup>47</sup> For this reason, current translations call the type of predication that Aristotle is rejecting ‘incidental predication’, and not ‘accidental predication’.<sup>48</sup> I claim that this type of predication is correlated with the being *per accidens* discussed

<sup>44</sup> Likewise Simplicius, in *Cat.* 51,13-8, admits that ‘Socrates is Socrates’ is a true predication, but denies it to be an instance of the ‘said of’ type. Instead, he analyzes it as an instance of the name’s being predicated synonymously of Socrates, as opposed to the predication of “one thing of another”.

<sup>45</sup> ‘The white’ sometimes means ‘whiteness’, but it cannot do so here, for ‘whiteness is Socrates’ is false.

<sup>46</sup> To be sure, *Topics* 103a30-1 takes “what is sitting or what is musical is Socrates” as an example of accidental sameness, but Aristotle shows no signs of construing predications, here or in general, as identities as I have just argued.

<sup>47</sup> There might arise a problem calling this an instance of essential predication. For, given that Socrates does not have a definition, it will lack some of the features of essential predication. ‘The (one) approaching is Callias’ can be taken to predicate a substance of an accident or of a substance having that accident.

<sup>48</sup> Cf. Jonathan Barnes, *Aristotle’s Posterior Analytics*, pp. 116-8 (Second Edition, pp. 114-7). In the Oxford translation of G. Mure, ‘συμβεβηκός’ is translated as “accident” throughout except for I.19 and I.22. See his note *apud* 73b4.

in *Metaphysics* V.7.<sup>49</sup> We can see this from the following passage (which I shall discuss further below):

One must look for truth from the realities. It holds thus: since there is something itself that is predicated of another not *per accidens*—I mean by *per accidens* as when we sometimes say that that white (thing) is a man, this not being similar to our saying that the man is white: for he is not white as being something different, while the white (thing) [is a man] because being a man has happened to white—thus some are such as to be predicated *per se*. [81b22-9]<sup>50</sup>

“The man is white” is a case of accidental predication; “the white is a man” is a case of something else. I shall call it ‘predication *per accidens*’, which in any case is a calque of ‘κατὰ συμβεβηκός’, or ‘unnatural predication’, in line with Aristotle’s remark.

As in *On Interpretation* 7, it is not clear whether Aristotle himself is allowing predication of singular expressions. He does state that singulars are not predicated “truly and universally”. [43a26] Well, they are not predicated universally, i.e., of more than one subject. Hence they cannot be predicated both truly and universally. But can they be predicated truly? He does say that singulars may not be predicated of *others*. [43a40] Well sure, for then they would be predicated of more than one object and be universal. But may they be predicated of one subject, that is of one name and one object, regardless of how many expressions give the name? Aristotle gives no reason to suppose otherwise. He does say that a singular term is not predicated of anything “naturally”, but only *per accidens*. So Aristotle does not in general reject the predication of a singular term of a singular subject.<sup>51</sup> But he then “legislates”, for the sake of his ideal, protocol language. Here, as he himself recognizes, he is contradicting common usage.

Aristotle reaffirms the doctrine of unnatural predication in discussing substance. In *Categories* 2 he characterizes a singular substance as what is neither in nor said of a subject. [1b3-5] Then its name would not be able to be predicated of a subject in those ways too. He says that in one sense the subject or substratum (ὑποκειμένον) is substance, for everything else is predicated of it, and it is predicated of nothing. [*Metaph.* 1028b36-7] As

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<sup>49</sup> So too Alexander, in *Metaph.* 371,7-8; 13. Hermann Weidemann, “Prädikation,” p. 1197, holds that Aristotle confuses essential and accidental predication with natural and unnatural predication. But we have no confusion if we distinguish the substantive and non-substantive uses of paronymous terms, and deal with predication *per se* and *per accidens* instead. Indeed, Weidemann seems to be heading that way himself.

<sup>50</sup> My translation differs significantly from Barnes’ here.

<sup>51</sup> James Duerlinger, “Predication and Inherence in Aristotle’s *Categories*,” p. 191, thinks that in the *Categories* at least, Aristotle allows ‘Socrates’ to be a predicate.

this characterization describes singular substances, we can take 'ὑποκειμένον' here to indicate the name of a singular substance. Hence Aristotle claims often that a name of a singular substance is not predicated of anything. [*Soph. El.* 178b35; *Metaph.* 1039a1]<sup>52</sup> I.e., it is not predicated in the ways that Aristotle wants to recognize in his protocol language: 'being said of' or 'being in'. Still he does not deny that such predications may occur in ordinary speech.

The aspect theory of predication explains Aristotle's urge to deny the predication of singular (terms). 'S is P' is supposed to give a further determination of the way in which S is (existent). By merely repeating a reference to the subject, a predication of a singular term merely asserts that the subject exists as it is. This may be harmless, but is usually vacuous, except in certain cases, like the use of a different singular expression for purposes of identification. But then we can take the two terms, subject and predicate, to express the same name and have the relation of sameness in number. Generally in a predication, Aristotle wants the predicate, the P term, to make a restrictive determination of the way in which the subject S exists.<sup>53</sup>

Perhaps the predication of singulars has a use even in Aristotle's own philosophy. Recall that Aristotle uses the example, 'Callias is Callias καθ' αὐτό'. This statement seems to insist that Callias exists independently, as a primary subject in his own right, and not as a secondary entity, arising, say, from the interweaving of Platonist Forms. At any rate, here Aristotle seems to be predicating a singular substance. But it is not clear whether or not Aristotle is reporting his own use or Plato's here in his lexicon.<sup>54</sup> Too, 'καθ'

<sup>52</sup> In the next passage [1029a10-26] Aristotle considers the subject as matter, and develops his notion of prime matter, having no determinate attributes. [1029a23-4] He then says that all the other categories are predicated of substance, and substance is predicated of matter. Daniel Graham, *Aristotle's Two Systems*, pp. 62-6, finds this passage the key to Aristotle's doctrine of scientific predication (in his S<sub>2</sub>). So too Frank Lewis finds it to be the source of Aristotle's later theory of predication, where prime matter is the ultimate subject. I however find it to be a view that Aristotle considers and then rejects at 1029a26-7. See my discussion in Chapter Three.

<sup>53</sup> G. E. L. Owen, "Inherence," p. 252: "...the predicate is not to name, but to bring the subject under a general description." On this view, the predicate of any singular term would be "unnatural".

<sup>54</sup> On this reading 'Callias is Callias καθ' αὐτό' says that Callias is Callias, just what he is, by himself, and that implies that no further specification of how Callias exists is required or available. In Aristotle's first, technical sense of 'καθ' αὐτό', which I have been translating as 'essential', the statement is false, strictly speaking. For, as Callias does not have a definition, strictly speaking, the 'P' term, 'Callias', is not a constituent of the definition of the subject, Callias. Still, 'Callias is Callias καθ' αὐτό' can be taken according to a variant of the first sense, the commensurately universal. Then it would indicate that 'Callias' is commensurately universal with itself, 'Callias'. This remark becomes not so trivial if we do not forget that, on the aspect theory, this statement has the verb, 'is Callias'. So what it asserts, strictly,

αὐτό' suggests that Aristotle is making a remark about the predication. So he might be mentioning and not using a predication of singulars.

Why does not Aristotle allow predication of expressions signifying singular substances, along the lines of his analysis of numerical sameness? There not only does he make statements like 'this man is Socrates', but also offers an analysis of them. 'S is P' would assert merely that 'S' and 'P' name the same thing.

Instead of admitting that Aristotle is inconsistent or changed his views, I suggest that Aristotle is offering a way of parsing some grammatical 'S is P' statements into his technical language. That is, such cases are to be read, and stated more precisely, as: 'S is the same as P'. Then Aristotle's account of numerical sameness applies.<sup>55</sup> We have seen Plato doing the same in the *Sophist*: to say that justice is justice is to assert that Justice participates in Sameness-as-Justice. I submit that his student, Aristotle, does the same. As I have said in the previous section, Aristotle does not reduce predications to identities. Rather he reduces identities to predications.

So Aristotle offers one way to keep some predications of singular expressions naming singular substances in his technical language: parse them away into statements of sameness. But doing that raises the problem mentioned in Chapter Two: can it ever be stated "just what ('ὅπερ') something is?" Consequently Aristotle does not allow all predications of singular terms by construing them all as identity statements. Aristotle wants predications to reveal how things exist and not merely to provide a name and nature belonging to the subject. Unlike the copulative theory, where a thing *has* its nature, for the aspect theory as for Aristotle a thing *is* its nature.

Notwithstanding the examples in his own work, Aristotle does reject the predication of singular expressions naming singular substances (in most cases) in his further discussion of *per accidens* predication. In fact, he appears to reject the predication of any expressions signifying explicitly a singular substance, even a universal term understood indefinitely (to mean, e.g., 'a dog' instead of 'dog', the species). For he says:

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is that 'Callias' and 'is Callias', or 'exists as Callias' have the same level of generality. Aristotle makes much of this doctrine when he argues that a singular substance, Callias, is identical to its essence, being Callias. [*Metaph.* VII.6]

Also the third sense particularly may apply here. A statement like 'Callias is Callias καθ' αὐτό' can be taken, according to the third sense of 'καθ' αὐτό', to assert only that Callias is a substance. For another perspective and more detailed analysis, see my *On Reduplication*, Chapter Two.

<sup>55</sup> This analysis does not give Aristotle an 'is' of identity. Rather, he is taking some uses of 'is' to have an ellipsis and to mean, strictly, 'is the same as'. Compare: "Is the hammer on the table?" "It is."

For it is possible to say truly that the white [thing] walks and that that large [thing] is a log, and again that the log is large and that the man walks. But to speak in the former and to speak in the latter way are different. For when I say that the white [thing] is a log, then I say that that to which being white happens (*συμβέβηκε*) is a log, but the white [thing] is not as a subject for the log: for neither being white nor being just which is something white did something come to be a log, so that it is not <a log> except as *per accidens* (*κατὰ συμβεβηκός*). But when I say that the log is white, not that some other thing is white, and to that [thing] being a log happens, as when I say that the musical [thing] is white (for then I say that the man, to which being musical happens, is white), but that the log is the subject, just what also came to be <white><sup>56</sup> as it is not something different from just what is a log or from some log. If it is necessary to legislate, let speaking in this way be to predicate, and speaking in that way not to predicate at all, or to predicate not simply but to predicate *per accidens* (*κατὰ συμβεβηκός*). The predicate is like the white [thing], while that of which it is predicated is like the log. [83a1-18; cf. 81b25-9]

Here Aristotle contrasts two sorts of predications: (I) one, like ‘the white (thing) walks’, ‘the large (thing) is a log’, and ‘the white (thing) is a log’; (II) the other, like ‘the log is large’, ‘the man walks’, and ‘the log is white’. All the terms in these examples are universal. But here they are used indefinitely and are taken to signify singulars in particular sentences. Even though all the predications are accidental—it is not necessary for a log to be white nor for a white thing to be a log—Aristotle finds a difference between these two sorts.

Aristotle once more recognizes that statements like ‘the white [thing] is walking’ and ‘the large [thing] is a log’ are well formed in ordinary discourse. However, he wants to “legislate”, and rule them out as predications, strictly speaking.<sup>57</sup>

Aristotle admits the second sort, like ‘the log is large’, to his technical protocol language. The first sort (I) he does not. In the first sort Aristotle has lumped two types of cases together: the first, where a substance (term) is predicated of an accident; and the second, where an accident (term) is predicated of another accident. Now these are precisely the two types of

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<sup>56</sup> This is added by the translators as implicit in the text, and it does not make that much difference. But note how statements of form ‘S is’ are avoided.

<sup>57</sup> Jonathan Barnes, *Aristotle's Posterior Analytics*, p. 166, finds this discussion of unnatural predication “rambling and digressive” relative to establishing the thesis that essential predications have a finite sequence. Rather, Aristotle must “legislate” and restrict the language to his protocol language in order to have a chance at his thesis. For Aristotle need to limit predications, e.g., to ensure that there cannot be reciprocal predication, as with quality of a quality. Only by constructing a protocol language can he avoid an infinite regress. Cf. D. W. Hamlyn, “Aristotle on Predication,” pp. 119-20.



cases that he has lumped together as illustration of being *per accidens* in *Metaphysics* V.7. Indeed, he makes the same points here as well. Consequently it is plausible to construe this unnatural predication as predication *per accidens*, in line with the interpretation that I have given in Chapter Three for being *per accidens*.

The first type of example is like the one in *Metaphysics* V.7, 'the musical (thing) is a man'. Aristotle dislikes such predications because here the subject term does not represent the "underlying subject". To be sure, an expression like 'the white', being concrete, implies the presence of some thing to serve as a substratum. For it is not "the white" that is a man; rather it is the thing that is white that is a man. And the thing that has that accidental attribute is the man himself. But here Aristotle is taking 'the white', 'the large', etc. to signify the accident and not the complex, the thing that is white. In statements of this first type, then, the logical subject appears only in the grammatical predicate. Likewise, in *Metaphysics* V.7 Aristotle analyzes 'the musical is a man' to assert that musical is accidental to man. This predication of 'man' is *per accidens*.

The second type of case, where an accident is predicated of an accident ('the white walks') is objectionable on the same grounds, but doubly so. For the statement has no direct reference at all to an object that exists *per se* and *simpliciter*, without being in something else. That is, it does not explicitly name any underlying, substantial object even in its predicate. Again the subject term should be read non-concretely, i.e., not as 'the thing that is white'. So the existence claim of the statement is at best distorted or perverted: the subject term does not provide a proper subject, and, as with the first case, the subject is an accident. So here both terms, 'white' and 'walks', are predicated of an implicit subject, say, Socrates.

Why does Aristotle dislike so much such statements? They may be trivial, but why not also innocuous? Well, if in a usual statement the subject is asserted to exist, and the predicate (the P term) is to specify just how the subject exists, we may see why Aristotle finds such statements unpalatable. In such statements the subject does not signify something that exists *per se*, in its own right. Such statements do not make an explicit statement of being *per se*. At best they do so for a subject signified by the predicate (as in 'the white is a man') or implicit (as in 'the white walks'). But Aristotle wants the sentence structure to reflect reality. So too in his discussion of being *per accidens* in *Metaphysics* V.7, Aristotle analyzes statements with reference to their logical subjects, as opposed to their grammatical subjects. Thus, he reads 'the musical is a man' to assert that the musical is accidental to man. In his technical language Aristotle wants the grammar to reflect his logic, and that to reflect his ontology. Consequently, unnatural

predication is unnatural since it does not give a grammatical structure in accordance with the nature of objects and their attributes.<sup>58</sup>

Accordingly, Aristotle contrasts unnatural predication (I) with the sort of predication that he finds suitable for demonstrative science (II):

Let the predicate be supposed to be predicated always simply (ἀπλῶς) of that of which it is predicated, but not *per accidens*: for in this way demonstrations might be demonstrated. So when one is predicated of another it is either in the definition (τί ἐστίν) or because it is a *quale* or *quantum* or *relatum* or something doing or being acted upon or where or when. [83a18-23]

Aristotle contrasts predication simply, or without qualification, with predication *per accidens*. Aristotle often uses 'ἀπλῶς' in the sense of '*per se*'. [Soph. El. 166b37-167a2] The rest of this text bears this out. For when 'S is P' is a predication *per se*, it indicates some element of the substance of the subject, or an accidental attribute of the subject. So this simple predication includes both essential and accidental predication. Indeed Aristotle proceeds to note this point.

Again those signifying substance signify just what that or a certain [type of] that is, of which they are predicated. But those that do not signify a substance, but are said of another subject, which is neither just what that is nor what a certain [type of] that is are accidents, as the white is of man. For a man is neither just what the white is nor what a certain [type of] white is, but is, perhaps, an animal. For a man is just what an animal is. But whatever do not signify substance must be predicated of some subject, and there must not be something white which, as it is something different, is not white. For good-bye Forms. [83a24-32]

Given that Aristotle is talking here about true predications of a subject, here he is distinguishing three types of predicates, in a particular statement: 1) predicates that signify substance 2) predicates that do not signify substance, but are said of another subject. He is contrasting these two, which both make statements of being *per se*, with 3) predicates of being *per accidens*.<sup>59</sup>

1) The first type concerns terms that signify a substance, i.e., items in the category of substance. These terms signify "just what" the subject is and so make an essential predication.<sup>60</sup> So if 'P<sub>e</sub>' is a predicate naming a

<sup>58</sup> Peter Strawson, *Individuals*, p. 136, calls this "...the doctrine that particulars can appear in discourse as subjects only, never as predicates, whereas universals, or non-particulars, can appear either as subjects or as predicates." Cf. pp. 165; 191-2.

<sup>59</sup> Aristotle has now divided the second sort distinguished above (II into 1 & 2) and is still contrasting it with the second sort (i.e., I = 3).

<sup>60</sup> See the discussion of 'ὅτι' in Chapter Two.

substance, then it is truly predicated only of a substance, in an essential predication. E.g., ‘animal’ may be truly said of Socrates, dog, man.

2) The second type deals with predicates that do not signify substance. As Aristotle limits his attention to categorical predicates, these predicates will name items in non-substantial categories. They then are said of another subject, given a loose sense of the paronymous term: e.g. to use Aristotle’s example, ‘man is white’, but ‘white’ is not said of man but indicates that the quality whiteness is in man, while there is a subject, sc., the name for a type of whiteness, e.g., ‘paleness’, that ‘whiteness’ is said of.<sup>61</sup> Here the predicate does not signify just what the subject is or what sort of thing it is (a constituent of its definition). Rather, it signifies something other than what the subject is, namely, what the accident is. The second type then is the predication of an accident. But such predications include both essential and accidental predications. For *differentiae* and *propria* appear in accidental categories. Strictly, they do not “signify substance”, first, because only their paronyms do—e.g., ‘rationality’ does not signify man—and, second, because Aristotle favors species and genera as the answers to ‘what is it?’, when asked about an item in any category. [*Top.* 102a31-4; 139a28-31] Aristotle marks these important accidents out by calling them “*per se* accidents”, as opposed to accidents in some other way. [83b19-20] That is, they are accidents, but are predicated essentially: they belong *per se*, while not being in the essence. [*Metaph.* 1025a31-2]

Aristotle calls these first two types ‘predications *per se*’. For a statement of being *per se* is said in as many ways as there are categories: ‘S is’ may be further specified by the name of an item in any category. Therefore, being *per se* has much the same structure as simple predication, or, shall we say, predication *per se*.

3) Aristotle seems to allude to the third type in the last line of the passage. [83a32] Here ‘the white’ is taken substantively to signify something that is both other than a substance that is white and other than something paronymous whose paronym is “in” the substance. I.e., ‘the white’ signifies a new subject for predication. (I call this the abstract reading.) But this looks like a Form of Whiteness, that itself is not white. Rather, Aristotle says, we may be tempted to say that the white is a log solely because the log is white.

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<sup>61</sup> Aristotle gives the example, “as the white of man.” The context might suggest a reading of this as: ‘as the white is said of man’. Perhaps, but for my interpretation to work either then Aristotle is speaking loosely in saying “the white”, or, better, take the reading, ‘as the white is predicated of man’: ‘κατά’ (‘of’) allows either reading. It is also possible that ‘the white’ signifies not the universal accident but the individual accident.

How do predication *per accidens* and being *per accidens* match up? Something, P, is said to have being *per accidens* when P is, because something else, S, is P. Thus, Aristotle says, not-white is *per accidens* because a crow, say, is not-white, and a crow is. [*Metaph.* 1017a18-9] Beings *per accidens*, then, are the sort of things whose names “naturally” function as predicates, and become subjects at best derivatively. Aristotle makes this same point about predication *per accidens*: ‘white’ in ‘the log is white’ makes a perfectly natural, respectable, scientific, categorial predication. But, put into subject position, it does not. As a subject, it appears to have being in its own right, but does not.

So predication *per accidens* has the same structure as being *per accidens*. So too for predication *per se* and being *per se*. Indeed, it can be viewed as the same doctrine, put relative to statements, instead of to things. I have remarked that Aristotle purposely creates a language, of statements, composed of names and verbs, that parallels his ontology. Here he is doing just that: he is rejecting those predications, respectable in ordinary language, that do not fit into his ontological scheme of the categories.

Although the texts on unnatural predication are obscure, they do suggest that Aristotle’s theory of unnatural predication has further, technical details besides what I have presented so far. Let me then, gingerly, continue.

In Aristotle’s examples of unnatural predications, the subject expression is not even a name. Rather, ‘white’ is a paronymous term, derivative from ‘whiteness’, where ‘whiteness’ names a quality. As I shall explain in my discussion of the antepredicamental rule, Aristotle does not mind predications where ‘whiteness’ is a name serving as the subject. Thus, ‘whiteness is a color’ is a true essential predication, where ‘color’ is said of ‘whiteness’. But to say ‘whiteness is a log’ is not merely false but looks ill-formed according to Aristotle’s ontology. For Aristotle holds that, of all the categories, only substance can remain the same while changing its attributes; items in other categories can provide no such substratum to serve as subject. [*Cat* 4a10-2]

So, although he starts out allowing, as in *Categories* 2, one accident to be “said of” another, like ‘whiteness is a color’, now he becomes less endoxic and more legislative. Because accidents have being *per se* only in a secondary sense, they ought not be subjects, strictly speaking. For they do not exist in their own right but in substances.

Thus a statement like ‘white is a log’ fails on two grounds: first, a paronymous term is used, that strictly does not name anything; second, if such a term be taken loosely, e.g., to name whiteness, either it amounts to saying that whiteness is a log, which is false or meaningless, or that whiteness provides a substratum or subject in which a log can inhere. But Aristotle denies that accidents provide such a substratum. Consequently he would not want to call sentences like ‘the white is musical’ or ‘the white is a log’

predications at all. Nor, especially for the former type, would he like to call them statements, given that ‘the white’ is not strictly a name, and a statement must contain a name.

Certain details of the text of *Posterior Analytics* I.22 support this further interpretation. At 83a5-6 Aristotle says that that to which “*being white* (λευκῷ εἶναι)” is accidental is a log. Now he does not say ‘that to which *white* is accidental’. I have already remarked that Aristotle uses the construction exemplified by ‘being white’ (‘be’ plus dative) to signify essences of real objects and attributes. I have argued in Chapter Five that Aristotle holds that strictly speaking items in the categories must be signified by abstract terms, like ‘whiteness’ or the equivalent ‘being white’. Aristotle is indicating here that ‘white’ strictly does not signify the accident, but rather indirectly expresses ‘whiteness’, which signifies the quality, whiteness. So ‘white’ strictly is no name, and so cannot provide a name to be a subject of a statement or predication. Nor can it provide the verb, although, as I have claimed in discussing the tripartite analysis of the statement, it can be present as a modifier of a verb or name.

Even taking paronymous terms like ‘white’ loosely to signify the quality, whiteness, Aristotle says that still it is not possible for a quality to be predicated of a quality, and conversely, and likewise for any name signifying an item in a non-substantial category:

Again, if this is not a quality of that, and that a quality of this, [i.e.,] not a quality of a quality, it is impossible for them to be contrapredicated of one another in this way—it can be true to speak thus, but they cannot be contrapredicated truly. For now [i] either they will be predicated as a substance, as either a genus or *differentia* of the predicate...

Now [ii] neither would any quale or any of the others [be contrapredicated], if it not be predicated *per accidens*: for all these are accidental and are predicated of substances. [83a36-b12]

In effect, Aristotle is saying that if one of two paronymous terms in the accidental categories were predicated of the other, then the latter could not be predicated of the former, whether the paronymous term be read i) substantively or ii) not, but instead abstractly. On the substantive reading, the derivative term (‘white’) signifies the item in the accidental category (whiteness). Once more Aristotle admits that such predications occur in ordinary language, but claims that they cannot strictly mean what they say. We may distinguish two types of cases here: A) essential predication in

accidental categories, like 'the white is colored'<sup>62</sup> B) accidental predication in accidental categories, like 'the white is musical'. A) 'The white is colored', if 'white' be taken as a subject in its own right, must be read either i) substantively, as 'whiteness is a color' or ii) abstractly, as 'the white is a color'. The first is a predication of the genus color of whiteness. This holds, but, it seems, not strictly speaking, since whiteness cannot exist by itself but only in a substance. Even if we allow such abstract predication of accidents, as Aristotle sometimes does, still the contrapredication, 'color is whiteness' is false. Aristotle has already ruled out ii) the other reading, where 'the white' is read abstractly, as then the predication is *per accidens* and not *per se*. B) Again, when we take 'the white' to be a subject in its own right, 'the white is musical', i) if taken substantively, predicates the genus music of whiteness, and so is false, if not ill-formed. [*Int.* 19b13-22; *Metaph.* 1015b16-34] ii) If taken abstractly, the predication is again only true *per accidens*.

I am not certain whether or not Aristotle wants to distinguish these two types of the predication of accidents (A & B).<sup>63</sup> For he makes these remarks in passing so as to rule out reciprocal predication in his protocol language. But this passage does have importance. Aristotle has ruled out many ordinary predications where a term signifying an accident, derivatively or directly, is the subject. A term like 'the white' cannot serve as the subject term if taken substantively to mean 'whiteness' (the term signifying the item in the category), as it has being *per se* only in a secondary sense, or 'the white' (taken by itself, with no implicit substantial term). But Aristotle has not ruled out 'the white' from being the subject term if taken concretely to mean 'the thing that is white'. The Greek reading sounds better than the English ('τὸ λευκόν' can be read thus). He needs to allow for this reading in his protocol language. Otherwise he will not be able to convert 'every swan is white' to 'some white (thing) is a swan' as he is wont to do in his syllogistic. I shall return to this point in Chapter Eight.

### *Complex Predication*

I have claimed that Aristotle views predication to build on further specifications of the primal assertion of existence. If he does this, it would be natural for him to consider yet further specifications, beyond those in

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<sup>62</sup> Strictly, the name signifying the quality is 'color' and 'colored' is paronymous. But terms like 'the white' and 'the colored' have two readings here: in the substantive reading 'the white' means 'whiteness'.

<sup>63</sup> Montgomery Furth, *Substance, Form and Psyche*, pp. 15-21.

statements of *tertium adiacens*. Indeed he does so in some detail, mostly in the course of considering complex predications built up from simpler predications. Thus, in *On Interpretation* 11, he worries about inferences like: ‘Socrates is a man and Socrates is white; therefore Socrates is a white man’, where a complex predicate can be constructed from two simple predicates.

Definitions are one type of complex, composed of genus and *differentia* (G-D), where the constituents, Aristotle says, are not predicated of one another. [*An. Po.* 90b34-8] Rather, they form a unity, and express “a formula of the essence. [*Metaph.* VII.12; 1030a6-7] The unity is *per se* and not *per accidens*: one in species. [1016b32] Aristotle says that a definition expresses just what a thing (ὄντις) is. [1030a2] To be defined, the subject must already exist without qualification (ἀπλῶς) [90a12] The non-existent is not definable. [92b28-9] The name signifying the substance is one and the same in number as its definition. [1016a32-3; 1018a5-7; 1031b18-20]<sup>64</sup>

On the aspect theory, a definition does indeed make an existence claim. The definition does specify the existence of the subject further, as all the ways in which the subject exists accidentally are being ruled out. The claim of the sameness of the term and its definition must not be understood as modern identity, but according to the account of numerical sameness given above. When Aristotle says that definitions cannot be predicated, he evidently means that the definitional complex forms a whole and that that whole has no predication relations between its constituents. [Ammonius, in *De Int.* 71,30] For Aristotle ties such predications to being *per accidens* in *Metaphysics* V.7. Still, Aristotle does admit that definitions as a whole can be predicated: ‘man is a biped featherless animal’.<sup>65</sup>

In the case of accidental unities, like ‘white man’, Aristotle sees more unity than ‘white musical’ has, which cannot be predicated at all. Still, its constituents do have some predicative relations: ‘the man who is white’. When predicated, these accidental complexes make two specifications of existence, and not only one, as the definition does. However, in other examples one or more of the constituents may be incidentally predicated, as opposed to ‘additionally predicated’. By this distinction, I mean that a term is additionally predicated when it is in a complex predicate and may be truly predicated of the subject separately. E.g., ‘white’ in ‘Socrates is a white man’ is additionally predicated, as it follows from that proposition that Socrates is white. A term is incidentally predicated when it is in a complex predicate but may not be truly predicated of the subject separately. E.g., ‘good’ in ‘Socrates is a good cobbler’ is incidentally but not addi-

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<sup>64</sup> *Posterior Analytics* 90b34-7. Cf. Jonathan Barnes, *Aristotle's Posterior Analytics*, p. 235.

<sup>65</sup> Jonathan Barnes, *Aristotle's Posterior Analytics*, pp. 198; 235.

tionally predicated, as it does not follow from that proposition that Socrates is good.

### *Aspects of Aspects*

Likewise, if statements that go beyond the mere assertion of 'is' specify that the subject exists in a certain mode or aspect of being, it would be appropriate for Aristotle to become concerned with the relations between aspects and their objects, and between different aspects. Again he does so, and, once more, mostly in his theory of inference. E.g., he is interested in whether, if a statement is true in a certain respect, whether it is true without that qualification. Once more, as he discusses aspects mostly in the context of inference, I postpone my discussion to Chapter Eight.

However, Aristotle does make one type of remark about aspects that concerns unnatural predication and not inference. Aristotle often makes remarks like 'the doctor builds, not *qua* doctor but *qua* builder'. [*Phys* 191b4-5] Such examples have in common the feature that all of its terms—the subject expression ('S'), the predicate expression ('P'), and the object of the 'qua' preposition ('M')—name items in accidental categories. Indeed, these terms, e.g., 'doctor' and 'builder', are paronymous terms, derived from the names of qualities that are species of knowledge. They both, loosely, name accidents; their subject is the human substance who builds and heals.

Now such examples, like 'the builder builds', predicate one accident of another. Why do they not qualify as examples of unnatural predication?—Because they can be read concretely: the substance that has the art of building builds. When Aristotle says, "the builder builds *qua* builder, and not *qua* doctor," he is specifying the aspect of man, indicated by the paronymous term that indirectly signifies the relevant attribute of the human being, the substance, most relevant to the predicate.<sup>66</sup> Here then Aristotle is specifying aspects. The human being, say, Xanthippe, exists as a doctor and as a builder. When she does some building, it is in her builder aspect,

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<sup>66</sup> Porphyry, in *Cat.* 114,9-10 says that the same thing is in different categories in different respects. Cf. 115,4-5; 140,2ff.; 140,31ff.: *S qua* man is substance; *S qua* three cubits is a *quantum*.



and not in her medical aspect. Likewise, we may understand “the bronze is movable *qua* movable and not *qua* bronze.” [*Phys* 201a29-34] Aristotle permits the predication with a paronymous accidental term as subject, so long as it be read concretely.

## CHAPTER SEVEN

### NEGATIONS

Aristotle seems to discuss how negations may attach to parts of categorical sentences under two different conceptions of their structure: the bipartite, name-verb structure, where indefinite names and verbs are used to negate, and the tripartite, subject-copula-predicate structure, where a negative particle is used to negate. Aristotle generally proceeds by considering the logical structure of the sentence when a negation is inserted at every possible grammatical point.<sup>1</sup> E.g., in the case of the bipartite ‘a man walks’, there are such possibilities as ‘a not-man walks’, ‘a man not-walks’, and ‘a not-man not-walks’. In the case of the tripartite, e.g., ‘every man is just’ there are cases like ‘not every man is just’, ‘every not-man is just’, ‘every man is not just’, and ‘every man is not-just’. There are further possibilities when more than one negation is applied. Some of these combinations seem barely intelligible grammatically, but Aristotle feels hardly constrained by ordinary language, so I have argued.

In fact, Aristotle does cover most of these possibilities, and uses sentences of both the bipartite and tripartite structures. Many commentators have found his discussions and doctrines inconsistent, and think that he has run two incompatible logical theories together. Another explanation is that he first had the name-verb theory, inherited from Plato, and then moved on to the subject-copula-predicate theory of the syllogistic.<sup>2</sup> I have discussed this issue already in Chapter Four. But the issue comes to a head in Aristotle’s treatment of negation. For here Aristotle once again switches back and forth between bipartite and tripartite sentences, and seems to think that he has a single theory for them both.

I shall proceed first by presenting what Aristotle says about negations in sentences having the bipartite, name-verb structure. I say ‘sentences’ because, as I have argued, not all sentences are statements strictly for Aristotle, i.e., assertions that he will admit to scientific and philosophical dis-

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<sup>1</sup> Of course in Greek the word order and the syntactic possibilities differ from the English. On the proper way to read a negation, cf. Ammonius, in *De Int.* 95,7-27; 87,14ff. Walter Cavini, “La negazione di frase nella logica Greca,” p. 18, notes also that Aristotle departs from current as well as from Homeric usage in the word order he uses to express his statements.

<sup>2</sup> Ammonius, in *de Int.* 83,8-21, claims that Aristotle inherits his logical terminology, and perhaps his problems, from Plato (except for ‘contradiction’).

course. Then I shall turn to looking at how Aristotle extends his views based on sentences that have the name-verb structure to statements, in particular to those expressed in the tripartite form of 'S is P'. As I do not think that Aristotle has two theories of the statement, I shall seek to provide a single interpretation that shows how his name-verb approach, interpreted via the aspect theory of predication, can accommodate what Aristotle says about statements, both bipartite and tripartite, and their negations.

### *Indefinite Names and Verbs*

Indefinite names and verbs serve as the ways in which names and verbs, serving as constituents of a bipartite sentence, may be negated.<sup>3</sup> Aristotle introduces the notion of indefinite names and verbs at the beginning of *On Interpretation*. He says that 'not man' is not a name, nor is it a statement (λόγος)<sup>4</sup> or a denial (ἀπόφασις). [16a29-30] Presumably with the last two Aristotle means that 'not man' should not have a verb understood, so as to mean the statement, 'there is (a) not-man', or the denial, 'there is not (a) man'. Aristotle says too that 'not man' is not a name strictly. He leaves his meaning obscure, but helps at 19b10 where he says that 'not man' is an indefinite name, "for it signifies what is somehow one in an indefinite way."<sup>5</sup> The point then is that when using an expression like 'not man' we do not suppose that there is anything in particular being named; we do not have to know what in particular we are talking *about* to use such an expression.<sup>6</sup>

So indefinite names do not signify an object, be it particular or general. But names must signify an object. Hence, although indefinite names may be respectable linguistic expressions, still for Aristotle indefinite names cannot be names.

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<sup>3</sup> F. W. Zimmermann, *Al-Farabi's Commentary and Short Treatise on Aristotle's De Interpretatione*, p. xliv, calls the indefinite name "...the artificial pattern 'not' + noun which, in analytical form, abstracts from the erratic uses made in the actual Greek language of the facility proving for the synthetical formulation of negative nouns by means of privative prefixes (like 'un-', 'in-', etc. in English)." Perhaps, but Aristotle's use goes far beyond the privatives, as he applies indefinite names to what does not exist.

<sup>4</sup> Ackrill translates this as 'phrase', but then has to translate it at 16a2 *et passim* as 'sentence'; Boethius, 504B, translates it as '*oratio*'.

<sup>5</sup> Michael Ferejohn, *The Origins of Aristotelian Science*, 132-3; 136, claims that for Plato indefinite names do not signify genuine unities nor carry determinate meanings. Aristotle will admit that, less strictly, indefinite names somehow signify a unity at 19a9.

<sup>6</sup> Cf. *Sophist* 257a and Alexander, in *Met.* [*Peri Ideōn*] 80,17.

Too, Aristotle says that nouns in cases other than the nominative do not express names, but instead inflections of names. [16a32-b1] His reasons here concern his regimenting ordinary language in order to have the language reflect the ontology. I have already noted in Chapter Three that Aristotle keeps his silence about certain grammatical constructions consisting of 'is' plus a noun in a non-nominative case. By this doctrine of the inflection of names, Aristotle eliminates certain respectable constructions in ordinary language from his philosophical protocol language. In doing this he is able to keep the logical subject of a statement from being something other than the grammatical subject. Even when Aristotle uses nouns in oblique cases, he ignores the inflection, and speaks of the subject as a name, a noun in the nominative case. E.g., in 'this is [belongs] to Philo', the logical subject is 'Philo', and the statement should be read as meaning 'Philo has this': a relation of a substance with something in the category of having is being signified. Again, as I have discussed somewhat above and shall discuss further in regard to the antepredicamental rule, Aristotle does not want to recognize paronymous expressions as names, as they do not directly signify objects. Now non-nominative nouns strongly resemble paronymous expressions, or at any rate do not stand for the same thing that the nominative does. E.g., 'that dog is Philo's' asserts that the dog is owned by Philo, and thus that Philo and the dog stand in a relation of master and possession. Thus 'Philo's' is a modifier that describes the dog, and at best indirectly signifies Philo in a relation of ownership, sc., Philo *qua* owner. But on Aristotle's theory 'an owner' is a paronymous expression, derivative from the relation of ownership, where 'ownership' and the substance that has the owning relation signify real things directly, while 'owner' directly signifies nothing. Hence Aristotle would be reluctant to call a non-nominative noun a name for the same reason that he rejects derivative expressions as names.<sup>7</sup>

Aristotle is a bit more discursive on the indefinite verb. He first makes points similar to those that he has made for names, and not surprisingly so, since names and verbs are his main types of significative expressions. Aristotle says that 'not heals' and 'not ails' are not verbs, but indefinite verbs. [16b11] He admits that, like verbs, such expressions do "additionally signify time and always belong of something" [16b12], but are not verbs strictly but only indefinitely "because they belong similarly in the case both of whatever is existent and of whatever is not existent." [16b15] Aristotle continues immediately, "*Similarly* [my emphasis] 'was healthy' and 'will be healthy' are not verbs but inflections of verbs." [16b16-7]

From these remarks, we may conclude that indefinite verbs may be predicated of a subject, as they "belong in the case of" things that exist, as

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<sup>7</sup> Aristotle treats them together in *Prior Analytics* I.36.

well as of those that do not.<sup>8</sup> This conclusion is strengthened by Aristotle's saying "similarly" for inflections of verbs: for what is the similarity? First, that, like indefinite verbs, inflections of verbs share the feature with verbs of being predicated of some subjects. Second, perhaps, that, like indefinite verbs but unlike verbs, for their predications to be true it is not required that their subjects actually exist now (i.e., they do not appellate). Of course, inflections of verbs *presuppose* a subject existing at some time (i.e., with ampliation), whereas indefinite verbs do not *presuppose* a subject existing at any time.

Does Aristotle restrict indefinite verbs to being constructed from expressions signifying items in the categories plus a negative prefix? I am inclined to think so, given Plato's attitude in the *Sophist* and given Aristotle's disinclination to worry about possibilities outside of our laws of nature.<sup>9</sup>

We also may infer that, like indefinite verbs, indefinite names may truly describe both what is existent and what is not existent.<sup>10</sup> So, it seems, an indefinite name like 'not man' is to be taken as a unit to designate the complement of the set of human beings: whatever is not a human will be a 'not man'. Thus existent things like a dog and non-existent ones like a chimera will both be 'not man'. Likewise, then, 'not heals' will designate the complement of the set of things that do heal. Existent things that could heal but are not going to, like Roland, after being wounded fatally; existent things that do not have the capacity to heal at all, like a stone; and non-existent ones like a chimera, all can have 'not heal' truly predicated of them. So the expressions constituting indefinite names and verbs seem to form units. Aristotle himself seems to indicate this when he calls the indefinite noun (*ἀόριστον ὄνομα*) a "non-name" (*ἀνώνυμον*). [19b7] (From here on I follow convention and indicate their unity by hyphenation: 'not-man'; 'not-heals'.)

<sup>8</sup> L. M. De Rijk, "On Aristotle's Semantics in *De Interpretatione*," p. 127, says that an indefinite verb is not a sentence fragment, but signifies a being or not-being indefinitely as predicate. Cf. J. L. Ackrill, *Aristotle's Categories and De Interpretatione*, p. 120, and Hermann Weidemann, *Peri Hermenias*, p. 177, who assert otherwise. I agree with the latter and the latter half of De Rijk's claim.

<sup>9</sup> E.g., 'a goat-stag does not teleport'. Suppose nothing teleports ever. Still, 'teleport' etc. is a complex expression whose constituents might all be categorematic. I suggest that indefinite verbs and names must be based somehow in the beings *per se* of the categories, although their actual constituents need not appear there.

<sup>10</sup> There is a variant text, according to which this is stated explicitly. But this text, a repetition of 16b15, is generally thought to be a later interpolation by Ammonius. See L. M. De Rijk, "The Logic of Indefinite Names in Boethius, Abelard, Duns Scotus and Rudolphus Brito," where he argues also that a name must name something existent, but an indefinite name when predicated can be said of what does not exist.

Aristotle also says that “every affirmation is composed of a name and verb, or of an indefinite name and a verb. [19b10-2] Aristotle does not make a similar statement about denials. The claim about the affirmation rules out an affirmation’s being composed of a name or indefinite name and an indefinite verb. However, he does say that every declarative statement (ἀποφαντικὸς λόγος) must have a verb or inflection of a verb. [17a10] Indeed, he repeats this point at 19b13-4, where he goes so far as to call inflections of verbs “verbs” because they additionally signify time. Aristotle does not state here how indefinite verbs may function. But he does seem to say that they can make assertions of some sort. For at 16b15 he says that an indefinite verb holds (ὑπάρχει) of both what exists and what does not exist. Then it seems to be true to say: a goat-stag not-walks. At this point I shall present and pursue two interpretations.

(A) One interpretation says that statements of a subject plus indefinite verb amount to a simple denial (‘a goat-stag not-walks’; ‘a goat-stag is not walking’). This interpretation has support at 20a6 where Aristotle says that ‘every man does not heal’ (οὐκ ὑγαίνει) should be read like ‘every man is not just’, sc., as a simple denial. This doctrine seems to rule out a statement’s being composed of a subject term plus an indefinite verb. This position seems to contradict the conclusion that we came to earlier. Now ‘οὐκ ὑγαίνει’ has the form of an indefinite verb. But it can also be read as the negation of a verb. Thus the Greek commentators explain that Aristotle does not let an affirmation be composed of indefinite verb because then the statement would be a denial.<sup>11</sup>

This interpretation, attractive and dominant though it has been, has its problems. Aristotle nowhere identifies the indefinite verb and the simple denial explicitly. He does not mention negation in discussing the name or the verb. Moreover, Aristotle says that there is no name currently in use for the “indefinite verb”. But when he introduces the denial, he has no trouble finding a name, namely: ‘denial’ (ἀπόφασις). [17a25-6] Furthermore, the problem arises that Aristotle takes the predication of an indefinite name (‘not-man’ or ‘not-just’) as an affirmation. Likewise ‘not-walks’ seems to be a single unit, predicated of the subject, especially if it is read as ‘is not-walking’. But then it would make an affirmation. Indeed, as we saw in Chapter Two, Plato wants to construe all negations thus, and Aristotle seems to follow him.

(B) On another interpretation, we take the predication of the indefinite verb still to be permissible but to make an affirmation. Then we have the

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<sup>11</sup> Anonymous in *De Int.* 71.2. Ammonius, in *De Int.* 69,12-5, however hedges and says that perhaps a statement can be composed of a subject plus indefinite verb.

problem that Aristotle rules out such sentences as being statements at 17a10.<sup>12</sup>

But how can either interpretation (A or B) explain Aristotle's claim that a statement must have a verb or an inflection of a verb? Here he seems not to allow the indefinite verb into a statement at all. Moreover, Aristotle denies that inflections of verbs are verbs at 16b16-7 while he calls them verbs at 19b13-4. Indeed, his justification for calling the inflections "verbs" because they additionally signify time would apply equally well, by his own admission (16b12), to indefinite verbs.<sup>13</sup> So how do indefinite verbs relate to statements? Can they (A) constitute denials, negative statements? Or (B) do they, by analogy to the predication of indefinite names, make metathetic affirmations? But these, Aristotle says, apply only to what exists.

Many commentators have found such difficulties in Aristotle's theory of negation to follow from his having two (or more) incompatible theories. As discussed in Chapter Four, perhaps Aristotle, some say, inherited a bipartite name-verb analysis, and then moved on to a tripartite term analysis. But Aristotle shows no signs of having changed and switches back and forth from one formulation to the other. I have argued that these two theories are but two expressions of the aspect theory.

Given due allowance to obscurity in these passages on account of their brevity, the aspect theory can shed some light here too. I have claimed that for Aristotle a statement makes an assertion about existence, that is, about being *per se* and not being *per accidens*. Thus, every (affirmative) statement asserts that its subject exists. The verb, whether it be 'is' or contain 'is' implicitly, makes that assertion of existence.

Now suppose we follow the second interpretation, that, taken as a unit, a predication of an indefinite verb, 'not-P' ('not-walks' or even 'not-is'), is predicated of 'S'. Given that an indefinite verb applies indifferently to what exists and does not exist, an indefinite verb does not make the assertion that the subject exists. But, like the indefinite name, it does assert that the subject "is" other than what exists (as P). E.g., 'Socrates not-walks' or 'the goat-stag not-walks' asserts that the subject, Socrates or the goat-stag, is something other than what walks. Now what walks must exist in order to walk. But in the assertion of the indefinite verb, Socrates or the goat-stag

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<sup>12</sup> E.g., Hermann Weidemann, *Peri Hermeneias*, p. 177, takes interpretation A, and views an indefinite verb as a sentence fragment that makes the subject negative. However L. M. De Rijk, in his review of Weidemann, p. 272, takes interpretation B: the indefinite verb rather like an indefinite name, holding indefinitely of what exists and what does not exist. But then he says that this does not rule out existential import.

<sup>13</sup> I claim no originality for most of these points. They are commonly made, e.g., by Ackrill in his commentary on *On Interpretation* 3 & 10. Indeed, they occasioned much of the subsequent debate in medieval commentaries, as we shall see in Chapter Nine.

does not exist *per se*, but “is” *per accidens*, because it “not-walks”, i.e., ‘is not-walking’.<sup>14</sup> Likewise Aristotle says in *Metaphysics* V.7 that the not-white is, because something existent is not white, or as the chimera is, because it is an illusion. Just as Aristotle does not allow that things that are said to be *per accidens* are thereby said to exist, so too he does not allow those that are subjects of sentences with indefinite verbs are thereby said to exist. So too in ‘the goat-stag is what does not walk’ (in the sense of ‘not-walks’), the ‘is’ does not assert existence.

In short, then, the indefinite verb is one way to express being *per accidens*, and the verb is the way to express *per se* being. An assertion of being *per se*, using a verb, makes an assertion that the subject exists; an assertion of being *per accidens*, using an indefinite verb, makes no such assertion. Still, just as an assertion of something’s having being *per accidens* does not rule out its having being *per se*, so too the subject of an indefinite verb could exist *in re*. Recall that Aristotle counts ‘Socrates is musical’ as an instance of being *per se* and of being *per accidens*.

This doctrine, following the interpretation of the aspect theory, solves the problems raised above. An indefinite verb does additionally signify time in a way, for it indicates that the assertion is about past, present, or future time. Yet, Aristotle is correct in holding that there is a difference between an indefinite verb and a verb in the way in which they signify time, although, he rightly notes that, when he wrote, there was no term available to express this difference. [16b14] The difference lies in a verb making an existence claim, while an indefinite verb does not. Indeed, in the indefinite verb, as in an assertion of being *per accidens*, the ‘is’, implicit or explicit, has the copulative function of joining the subject with a negative, or metaphetic, predicate. Yet the ‘is’ *per accidens* is not the mere ‘is’ of copulation. For ‘is’ in an assertion of being *per accidens* does more to connect subject and predicate: it also makes an assertion, usually implicitly, about certain other objects and attributes which must really exist in order for it to *be* (*per accidens*) as an assertion.

Similarly, an inflection of a verb differs from both a verb and from an indefinite verb. Like an indefinite verb, an inflection does not require the present existence of the subject. However, Aristotle stresses that a statement, strictly speaking, must concern what presently exists. (Recall that he holds that a statement changes its truth value over time.) Inflections of verbs do not require that, and so are like indefinite verbs, in not asserting

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<sup>14</sup> Here is an inference from indefinite verb to indefinite name. Aristotle does this quite commonly in speaking of ‘is not’ and ‘not being’.



present existence of their subjects.<sup>15</sup> However, as they do assert the real existence of their subjects at some time, they are unlike indefinite verbs and like verbs, and so might be said to make statements, in a looser sense of ‘statement’. I.e., the use of an inflection of a verb indicates that a statement of present tense, an assertion of being *per se*, was once or will be true.

We may also resolve problems with a sentence having an indefinite verb. First, let us take the interpretation treating this as an affirmation (B). Strictly, a (positive) statement, being an assertion of being *per se*, requires that its subject exist. This requirement is not necessarily met when the sentence has an indefinite verb. Thus, strictly, sentences with indefinite verbs are not statements. To be sure, such sentences are respectable, more or less, in ordinary and in philosophical discourse. But, when revamping the language to suit his ontology, Aristotle eliminates such sentences as statements, strictly speaking. So too, as I have said, Aristotle requires statements to have categorial names as subjects. Note that Aristotle never says that a subject term plus an indefinite verb is a statement (λόγος), although he does imply that an indefinite verb plus a subject term does make a significant grammatical unit, presumably a sentence. Just as not all sentences are declarative, so too not all sentences are statements.

This interpretation does assume that a sentence having an indefinite verb makes an assertion, but only one of being *per accidens*. Given that an indefinite verb constitutes a single unit, the sentence structure supports that assumption: in ‘Socrates not-walks’, ‘not-walks’ is predicated, and affirmed, of ‘Socrates’. My discussion in Chapter Two support this too: Plato would render ‘Socrates not-walks’ as ‘Socrates participates in other-than-walking’. Such construals support, and motivate, the equivalence of ‘Socrates not-walks’ with ‘Socrates is not-walking’.<sup>16</sup> As we shall see, Aristotle takes the latter as a metathetic affirmation.

In sum, on the second interpretation (B), a name plus indefinite verb does not constitute a statement of being *per se*. Aristotle says that ‘not-P’s’ is predicated as a unit of ‘S’. [19b9-10] We have an affirmation here, but not of being *per se*, but of being *per accidens*: ‘the goat-stag not-walks’, i.e., ‘the goat-stag is, *per accidens*, in a way other than walking; i.e., ‘there “is” a goat-stag that does not walk’. There is an affirmation here, but not one of being *per se*. So Aristotle does not discuss this case in his logic. For he has exiled the study of being *per accidens* from science. He seems to

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<sup>15</sup> So Aristotle does not recognize a sentence with an inflection of a verb as a statement. Ammonius, in *De Int.* 90,23-8, does, and so departs from Aristotle. But then Ammonius holds the copulative interpretation as we shall see.

<sup>16</sup> In turn, cf. the equivalence of ‘a man walks’ with ‘a man is walking’ in *Metaphysics* V.7.

when he discusses the metathetic 'S is not-P'. But that statement can be read *per se* as well as *per accidens*. Taken as a statement of being *per se*, we have an assertion of an existence with an indefinite name as predicate. This Aristotle discusses. He ignores the other reading of being *per accidens*, just as he ignores being *per accidens* in the *Metaphysics*.

On the other interpretation (A), treating a predication of indefinite verb as a denial, we can take it to be equivalent to the simple denial. Then it amounts to 'S is not P', i.e., 'not (S is P)'. So 'the goat-stag not-walks' would be equivalent to 'it is not the case that the goat-stag walks'. I find this interpretation much more elegant and simple than the other. Yet, for the reasons given above, I doubt that it is Aristotle's. Nevertheless, we can see why later authors would embrace it, as I shall discuss in Chapter Nine.

Still, Aristotle can allow a statement to be composed of an indefinite name as subject plus a verb. For such statements, when affirmative, do assert that the subject exists, and so satisfy that requirement for being a statement. When the indefinite name fails to name something that exists, as in 'not-being', then the statement will be false, but still a statement.<sup>17</sup> Sentences with indefinite names as subjects may be true, if taken as assertions of being *per accidens*.

When put into predicate position, an indefinite name can constitute a statement, but not as the whole verb. For the predicate, in 'S is not-P', is not 'not-P' but 'is not-P'. Here, as I have said in Chapter Two, 'not-P' qualifies the verb 'is', which asserts present existence. This is why Aristotle says that the predication of an indefinite name yields an affirmation and holds true only of what exists, as I shall discuss below.

### *Denials*

Beginning his account of the various types of statements and their squares of opposition, Aristotle says that the basic affirmation, where the copula 'is' serves as the entire verb itself (as *secundum adiacens*), is 'man is', and the basic denial 'man is not'. Next come 'not-man is' and 'not-man is not'. [19b14-6] I have discussed the import of these claims for the aspect theory of the statement in Chapter Four. Here I focus on the negative forms.

All Aristotle is doing here is giving examples of (indefinite) affirmative and negative statements of *secundum adiacens* first with a name as subject, and then with an indefinite name as subject. So Aristotle is illustrating the ways in which such statements of *secundum adiacens* can be negated: either

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<sup>17</sup> 'Not-being is' can also be taken as a sentence that is not a statement, sc., as a predication of being *per accidens*. Clearly 'a not-being is a chimera' should be.

the subject term ('man') can be negated and so made indefinite ('not-man') or the verb ('is') can be negated ('is not'). But, on my preferred interpretation (B), the negation of a verb is not an indefinite verb. Accordingly, I shall take (οὐκ ἔστιν) 'is not' here not as an indefinite verb, but the denial of a verb.

Aristotle then says that 'is' may also be "additionally predicated, as a third thing" (*tertium adiacens*), as in 'man is just'. [19b19-21] Here 'just' is the main predicate (the *secundum adiacens*), but still 'is' is "additionally predicated" of the subject, in the sense discussed. Because of there being more terms, there are more ways to negate propositions of *tertium adiacens*. Aristotle says that the negation may be attached to the subject term, to the *secundum adiacens*, and to the *tertium adiacens*, e.g., to 'man', the subject term, to 'just', the predicate complement, and to 'is', the copula.

When the negation is attached to 'is', the *tertium adiacens*, Aristotle takes it to signify that the entire original, positive statement is now denied. Thus 'S is not P' means 'it is not the case that S is P'. According to the aspect theory, that means that the existence of S as a P is being denied, i.e., that there is no such existence. I shall call this type *the simple denial*. E.g., in 'man is not just', the predication, of 'just' of 'man', is denied so as to say that it is not the case that man is just.

When the subject is negated, the name that is the subject, 'S', then turns into an indefinite name, 'not-S', that designates whatever is not S. Since whatever does not exist is not S, 'not-S' applies to all items that do not exist as well as to those items that do exist but are not S. However, when 'not-S' appears as the subject of an affirmative statement, of *secundum adiacens* or of *tertium adiacens*, it is asserted to exist. Then, for the statement to be true, 'not-S' will have to name something that exists. The only way that 'not-S is P' can be true, when 'not-S' does not name something that exists, is for this sentence to make an assertion of being *per accidens*, and so not be a statement, strictly speaking. Yet the denial, 'not-S is not P', can be taken as a denial of being *per se*. Perhaps that is why Aristotle allows a statement to have an indefinite name but not an indefinite verb.<sup>18</sup>

When attached to the predicate complement, the negation forms a complex that is predicated of the subject: in 'man is not-just', 'not-just' is predicated of 'man'. So when the negation is attached to 'P', the *secundum adiacens*, Aristotle takes it to negate 'P' only, and not the entire sentence. The denial becomes 'S is not-P', which still asserts that S is, or exists, but not as a P, but as a not-P. Here the negation turns the original expression into its "indefinite" counterpart: e.g., if 'P' is a name, then 'not-P' is an indefinite

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<sup>18</sup> Likewise even Parmenides allows negative statements about Being, as discussed in Chapter Two.

name. For instance, 'Socrates is an animal' may have its *tertium adiacens* negated, so as to get 'Socrates is a not-animal', that is, Socrates exists, but as something other than an animal.<sup>19</sup> I shall call this type *the metathetic denial*.

It is easier to distinguish between simple and metathetic denials in Greek than in English. In Greek a negation like 'οὐκ', put just before 'ἔσπιν', expresses a simple denial, as in 'τὸ ξύλον οὐκ ἔστι λευκόν'. A negation put after 'ἔσπιν' and just before the predicate complement signifies a metathetic denial, as in 'τὸ ξύλον ἔστι οὐκ λευκόν'. Aristotle sometimes uses an inverted order, as in 'οὐκ ἔστι λευκὸν ξύλον'. Here, when 'οὐκ' precedes 'ἔσπιν', it expresses the simple denial. This formation looks very much like, 'it is not the case that the log is white'. [*Gen. Cor.* 317b11-3]

These possibilities for different locutions for the negation in a statement support my characterization of a tripartite sentence, 'S is P', as taking the 'P' term as an adverbial qualification of the statement of existence: 'S is, as a P'. For note that the same negation patterns arise with adverbs. E.g., in 'Socrates walks quickly' (or 'God is preeminently'), the negation has a different significance when placed before the various words of the sentence. 'Not' functions like 'only'.

Both negations of *secundum adiacens* and those of *tertium adiacens* have complexities and present difficulties, if not for Aristotle, then certainly for the aspect theory of predication. I shall thus consider each sort of negation in greater detail.

### *Simple Denials*

Aristotle holds that the negation of 'is', sometimes known as the (grammatical!) copula, as in 'man is not just', constitutes a denial of the correlated proposition, e.g., 'man is just'. Here no existent subject need be presupposed. For instance take 'the log is white' which is to be read as 'the log exists as white'. (Or take the existential translation, yielding a predicative complex: 'there is a white log'). So 'the log is not white' (or: 'there is not a white log'), i.e., the denial of 'a log is white', can be true when there is not a white log, no thing at all, present to serve as the subject.

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<sup>19</sup> Not all such complexes are indefinite names; for sometimes the 'P' term is a derivative term, as in 'not-just'. This paronymous form should be read substantively, as 'the thing that is not-just', as discussed in the previous chapter. Moreover, as 'not-P' forms part of the verb, and is not taken by itself, it is best not to call even those like 'not-dog' indefinite names in this context.

[52b30-1]<sup>20</sup> The denial can be true simply because the subject term does not exist. In this way, ‘Socrates is not healthy’ and ‘Socrates is not sick’ can both be true, sc., when Socrates does not exist. [Cat 13b14-9]

This view of simple negation presents some problems for the aspect theory of predication, as well as for Aristotle, insofar as he may accept the aspect theory. Let me list some major ones and then consider each in turn.

1) Above, I have distinguished a statement from a sentence: a sentence is a grammatically correct utterance, whereas a statement is a sentence with some additional constraints, of vocabulary and syntax, made in view of Aristotle’s ontological commitments. I have said that for Aristotle a name plus an indefinite verb constitutes a sentence but not a statement.

However, a simple denial of *tertium adiacens*, ‘S is not P’, which is a statement for Aristotle, looks very much like a sentence with subject plus indefinite verb. For just as the indefinite verb may be said indifferently of both what exists and of what does not exist, so too a simple denial is true of a subject that names something that exists but is not P, and of a subject that does not name something that exists. Why not then identify the simple denial with a sentence of subject plus indefinite verb? But Aristotle denies such verbal sentences to be well formed statements. Or does he?

2) Moreover, a statement of *tertium adiacens*, construed on the aspect theory, makes a conjunctive claim, that S exists and that S has the attribute P. But then, given that a simple denial negates the entire affirmation, it follows that the denial has a disjunctive structure: ‘S is not P’ would mean ‘either S does not exist, or S does not have P’. But Aristotle shows no evidence that he recognizes a disjunctive structure there.<sup>21</sup> Furthermore, a disjunctive structure for simple denials will produce complexities in the inferences of negative syllogistic forms. Aristotle shows no awareness of such complexities.

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<sup>20</sup> The translation ‘there is not a white log’ is permissible but suspect; ‘(a) log is not white’ seems preferable. The same Greek grammatical construction [20b5], ‘οὐκ ἔστι λευκός ἄνθρωπος’, is translated as ‘(a) man is not white’, by Ackrill. Still cf. Philoponus, in *An. Pr.* 373,8-10. Walter Cavini, “La negazione di frase nella logica Greca,” pp. 27-8, proposes the copulative and the existential readings of the simple denial. Perhaps David Bostock *Aristotle’s Metaphysics: Books Z and H*, p. 49, has the best view: “But it is fair to say that even if he did see the difference still he did not regard it as having any philosophical significance.” Cf. Chapter Four and the references to Cavini’s views.

My view disagrees with George Englebrechtsen, “On Propositional Form,” p. 110: “For Aristotle and ourselves a negated proposition is neither more nor less logically complex than an unnegated one.” I.e. the predication relation may be negative or positive.

<sup>21</sup> Michael Wedin, “Negation and Quantification in Aristotle,” p. 143, has disjunctive truth conditions for the simple negative statements. Cf. Walter Cavini, “La negazione di frase nella logica Greca,” pp. 24-5; Charles Kahn, “Some Philosophical Uses of ‘To Be’ in Plato,” p. 105.

3) Finally, both Aristotle's own view and the aspect theory, be they the same or different, have problems with reconciling two texts. As noted, Aristotle says that 'Socrates is healthy' and 'Socrates is sick' are both false when Socrates does not exist. However, he also says that 'Homer is a poet' is true, although 'Homer is' is false. [*Int.* 21a25-8] Surely Aristotle has a problem here. And so does the aspect theory, since we do make many true claims about what presently does not exist.

The replies that I shall give do not have much complexity or subtlety. Indeed, I submit, that adds to their plausibility as an interpretation of Aristotle. For, were they especially complex or sophisticated, they would become, *ipso facto*, removed from the text. After all, Aristotle shows no sign of glossing over a lot of subtle doctrine.

1) To make some headway, let me examine in more detail the two things being compared: a sentence of subject plus indefinite verb, 'S not-P's', and a simple denial, 'S is not P'. I have already argued that on the better interpretation (B) the two should not be equated.

First consider the case where Aristotle's position is clearer, perhaps because he says so little about it: a sentence composed of subject expression plus indefinite verb. Aristotle clearly states that an indefinite verb may hold truly of anything, whether it exist or not. Here then the subject has no existential import: even a chimera not-walks. Consequently, an indefinite verb does not make an assertion of being *per se*. Rather, an indefinite verb appears to apply equally to what is *per se* and what is *per accidens*. So a sentence with an indefinite verb cannot constitute a statement, strictly speaking, as that concerns being *per se*. Moreover, as an indefinite verb is taken as a whole, and then predicated of a subject, a sentence with an indefinite verb is an affirmation and not a denial.

Indeed a sentence like 'a goat-stag not-walks' seems more like the metathetic predication, 'a goat-stag is not-walking', than a simple denial. If we expand 'walks' to 'is walking', and negate 'is walking' in the sense of the indefinite 'is other than walking', we obtain 'a goat-stag is not-walking'.<sup>22</sup> Then we have a metathetic affirmation and not a denial. But, because the indefinite verb describes both what exists and what does not exist, we must take the 'is' here to assert only being *per accidens*. Thus 'a goat-stag not-walks' is equivalent to 'a goat-stag is not-walking', the metathetic affirmation, only when considered as 'the goat-stag is *per accidens* and not-walking (other than walking) is predicated of goat-stag'. However, Aristotle uses the metathetic affirmation also in a different way, in an as-

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<sup>22</sup> Ammonius, in *De Int.* 263,10ff., notes that Aristotle analyzes 'not-S' as 'other than S', and cites the *Sophist* and the *Philebus* explicitly.

sertion of being *per se*. Here it applies only to what exists. Such metathetic affirmations are not equivalent to a statement with an indefinite verb.

Now consider the denial of an affirmative statement. According to the aspect theory, an affirmative statement, 'S is P', makes an assertion of existence *per se* for the subject and asserts that it has existence as being a P. When this affirmation is denied, a certain mode of being *per se* is denied of the subject, i.e., being as a P is denied of S. Of course such a denial has two possible causes of truth: that S exists, but in some other mode or modes of being (including always some mode of being a sort of substance,  $P_e$ ), or that S does not exist at all.<sup>23</sup>

In ordinary contexts Aristotle views the denial of an affirmative statement to deny only the mode of being *per se*, and not the being of the subject in any mode whatsoever. For remember, to make any true statement of *per se* being requires that the subject name an item in the categories that presently exists. And it is those beings that Aristotle said are singular or universal when he distinguishes types of statements. Further, in ordinary speech it is presumed that we are talking about what exists, especially in talk about singulars. Remember that singulars, primary substances, constitute Aristotle's primary focus. If I say, 'Socrates is not a dog', then the usual presumption is that Socrates is something else, and not that Socrates never existed. So too, in (normal) modern classical logic, it is nonsensical to say 'Socrates does not exist': all proper names, also known to Aristotle as names for singular substances, have existential import, since they name individuals in the domain. Aristotle does not have that requirement, but still has that presumption. For as he says in *Posterior Analytics* II, before asking what an object is, or what attributes it has, first, he says, it must be settled whether or not it is, i.e., exists. Thus, in Aristotle's discourse, to say anything of something besides that it does not exist already assumes that the question whether or not the subject exists has been settled in the affirmative. We might then say that a default for a denial of a statement is that there is another, affirmative statement about the same subject. The subject S must exist in some other modes of being, in particular, some in the category of substance: for Bucephalus to be, he must be a horse. That is, to deny that S is P requires that S be *per se*. So normally the denial of 'S is P' will be that S is not predicated of S, as the other possible cause of truth, that

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<sup>23</sup> M. Soreth, "Zum infiniten Prädikat in zehnten Kapitel der Aristotelischen Hermeneutik," p. 390, recognizes this disjunctive structure: 'to be a not white log' is ambiguous: that there is a log, but it is not white; that there is something white, but it is not a log; that something is neither white nor a log. Cf. Walter Cavini, "La negazione di frasi nella logica Greca," pp. 27-8.

it is false that S is *per se*, is ruled out by admitting 'S' into (scientific) discourse.<sup>24</sup>

Nevertheless, Aristotle allows this default to be overridden, as he explicitly states in his discussion about Socrates' health which I shall quote below.<sup>25</sup> 'Socrates is not sick' is true when Socrates does not exist. Hence a denial of an affirmation of being *per se* has no existence condition: that 'S is not P' says that it is not the case that S exists as a P, i.e., that S does not have being *per se* in this mode. What has being only *per accidens* does not have being *per se* at all, and so truly has 'existing as a P' denied of it. Note that asking about the health of Socrates, now dead, has a strange, sophistical ring to it: 'Is Socrates healthy today or not?' We do not ask for medical reports for people who do not exist at present; if we reply at all, we would say that he is neither...because he is dead.<sup>26</sup> In such cases the subject "is" only *per accidens*, as indeed Aristotle says about 'Homer is a poet'.

Aristotle does make one remark bearing on existential import for denials that may lead to misunderstanding. He says that 'is not equal' and 'is not-equal' differ "for something is the subject for (*ὑποκείται*) what is not-equal, namely the unequal, while for the other [what is not equal] nothing." [51b26-7] This seems to say that for 'S is not-equal' there is, or exists, a subject S, while for the simple denial, 'S is not equal', there is no such subject, that is, that in a denial the subject must not exist. But that reading is too strong, for at least in some cases 'S is not P' does have an existent subject, e.g. a pair of unequal sticks. So to take this remark thus is to have Aristotle say something false.

Instead, I propose to take his remark to mean that there is no subject with an underlying unity for the denial of equal. [Cf. *Int.* 19b9] Now this sounds as if I am then going either to have to conflate 'is not equal' with 'is not-equal', or to admit that the subject must not exist. But there is a middle road. i) There are some subject terms naming existing things that can be equal but are not, like two sticks. ii) There are also other subject terms

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<sup>24</sup> Like Cavini, Michael Wedin, "Aristotle on the Existential Import of Singular Sentences," pp. 191-2, says that Aristotle holds that a statement implies, and does not presuppose, that its subject exists, unlike Strawson's solution

Christopher Kirwan, *Aristotle's Metaphysics: Books Γ, Δ, and E*, Second Edition, p. 80, construes 1003b10 on denials being among the things that are: "Aristotle has in mind not negative statements (e.g., that tea is not alcoholic) but negative states of affairs (e.g., tea's not being alcoholic." But we need not complicate Aristotle's ontology as Kirwan does, p. 81: "Aristotle's solution to the supposed difficulty [1003b10] is that 'x is non-existent' entails the existence, not of x, but of a more abstract entity, the denial of x's existence."

<sup>25</sup> So, against, Rick Van Brennekom, "Aristotle and the Copula," pp. 10-1, Aristotle has a coherent way to talking about what does not exist. In contrast, the copulative theory usually insists on this default value without exception.

<sup>26</sup> Strictly: has died. Cf. *On Interpretation* 11.



naming existing things that are neither equal nor unequal for the reason that they do not have the capacity for being measured thus. E.g., are blueness and redness equal or unequal? They are neither; they are not equal; they are not unequal, i.e., they do not have the privation of inequality, and do not exist in that mode. Hence the existing things that are not equal include both existing things capable of being measured and compared quantitatively that are not equal, and existing things that are incapable of being measured and compared. iii) Yet other subject terms, like ‘goat-stag’, do not name anything existing now, and so cannot have any categorial predicates like ‘equal’.<sup>27</sup> It is reasonable that Aristotle would not hold that such a class, e.g., of things that are not equal, for any of these three reasons, does not constitute a natural unity and so there is not underlying subject for those that are not equal.

The simple denial and a sentence with the same subject plus an indefinite form of the verb used differ in structure and in meaning. The denial is negative; the indefinite sentence is affirmative. Both rule out a certain way that the subject might be asserted to exist. But one does so by denying the presence of a certain attribute specifying existence *in re*; the other by predicating affirmatively an attribute that is the logical complement of a positive attribute in an assertion of being *per accidens*. Hence Aristotle has some reason for refusing to allow sentences with indefinite verbs in his scientific language.

The difference between the two is easy to overlook, especially in Greek (where ‘not walks’ and ‘is not walking’ can be expressed by the same words). Moreover, as we saw in *Metaphysics* V.7, assertions of *being per se* and of being *per accidens* overlap. ‘Socrates is not walking’ could be read either way.

2) Given this position, then the conjunctive structure of an affirmation does result in a disjunctive structure for its denial—that it is not the case that S exists as a P requires either that S does not exist, or that S exists but not as a P—Why, then, does Aristotle not acknowledge this disjunctive structure explicitly?<sup>28</sup>

First, note that on the aspect theory a simple affirmation does not have a conjunctive structure. Rather it has a single assertion of being, or existence,

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<sup>27</sup> Ammonius, in *De Int.* 164,19-26; Philoponus, in *Cat.* 187,5-7; *Alfarabi's Commentary on Peri Hermenias*, ed. Kutsch & Morrow, 109,14-24 [trans. Zimmermann, pp. 105-6]; Avicenna, *Al-'Ibāra* 77,8ff.

<sup>28</sup> Note that Aristotle does recognize simple affirmations that have compound truth conditions have their corresponding denials having disjunctive truth conditions. So Walter Cavini, “La negazione di frase nella logica Greca,” p. 17 claims for 18a18-27; Robin Smith, comm., *Prior Analytics*, pp. 135-6 on 37a15-7.

more or less qualified. Various statements can be inferred from it and then conjoined. But that does not make it a conjunction, any more than an atomic proposition in modern predicate logic is a conjunction because a conjunction can be derived from it or proved equivalent to it.

Also, I find it misleading and anachronistic to complain about the denial, on the aspect theory, having two possible causes of truth, one being the non-existence of the subject, the other being the existent subject's failing to have the predicate. For surely, on Aristotle's theory, a denial has more than two possible causes of truth anyway. E.g., if S is not just, that might be because S does not exist, or because S does not have the attribute of justice. But the latter is not a single possibility but harbors many possibilities: either S may not be the sort of thing that has moral virtues at all, like a rock or log, or S is the right sort of thing but has a contrary attribute, like injustice, or S is the right sort of thing, but has not yet developed to the point of having moral virtue, like a child. Hence there are more than two possible causes of truth for a denial anyway, as the Aristotelian tradition recognizes routinely.

Second, as I said above, in ordinary contexts, the default for a denial is that the subject does exist but not as P but in some other way. Aristotle would be inclined towards this default, since statements, strictly speaking, in his protocol language, contain only names of items in the categories, all of which exist now. After all, his main interest lies in speaking truly about what is *per se*.

Third, Aristotle still does appear willing to recognize and admit special contexts, where the subject of the denial does not exist and the default thus does not obtain. as with Socrates when it is said that he is neither healthy nor sick. [*Cat.* 13b29-35] This context is special: as Socrates does not exist now, it is strange to speak of him in the present tense anyway.

But, as Aristotle gears his logic towards syllogistic and demonstration, these special contexts will hardly ever appear. For the terms of syllogistic in science are derived from names of items in the categories, where all these exist now. Moreover, in sound syllogisms, at least (sc., valid with both premises true), the possibility of the subject of the denial not existing is ruled out by the other premises. That is, if one premise were a denial, the other premise would have to be an affirmation, in order to have a valid syllogism. [*An. Pr.* 41b6-9] But that other premise generally rules out, directly or indirectly, the possibility that the subject of the denial does not exist. E.g., if every A is B, and no B is C, then the universal affirmative premise requires that there exist an A. Hence there must also exist a B, and so the denial has a subject naming something that exists.

Syllogisms with some negative statements (Celarent: I EAE) do not present a special problem, so long as the negations are read uniformly. For then a negative conclusion always follows from the premises. If we read

that negative statement to amount to the denial of the corresponding affirmation, no existential import need be assumed.<sup>29</sup>

However, as we shall see in the next chapter, Aristotle takes negative statements in the syllogistic as “privative”. [25a14] This amounts to putting the negation with the predicate; in other words, treating a simple negation like a metathetic predicate in a predication of being *per se*. Taken in this way, simple negations end up being affirmations, and so their subject terms too would have existential import.<sup>30</sup> The ‘belongs to’ construction favors this privative construal: P belongs to no S or to not every S. Note that Aristotle need not make this move. But he does. Given his focus on the syllogistic as a tool for the science of beings *per se*, we can understand why he would accord existential import even to simple denials by construing them “privatively”.

The simplest way to explain how Aristotle would handle non-existent subjects and assertions of being *per accidens* in his syllogistic is to say that when using them he is supposing them to make statements of being *per se*. Likewise, in reduction to the impossible Aristotle assumes as true assertions that do not signify what really exists. Again, Aristotle says that the same syllogisms will hold when the premises are both categorical or both necessary. [An. Pr. 29b36-9] He could be saying that, if we suppose the premises to be true (sc., if we took accidental predications to be necessary), the same syllogisms will be valid. So too, for the sake of arguing with sophists Aristotle could accept assertions of being *per accidens* as if they were true statements even though he will end up rejecting them.

3) Reconciling Aristotle’s remarks about Socrates’ health and about Homer’s poetry has become a major cottage industry among philosophers. I now present my handiwork.

In discussing contraries, Aristotle clearly states that simple denials are true both of what exists and what does not exist:

For ‘Socrates heals’ is contrary to ‘Socrates ails’. For in these cases it is not always necessary that one be true and the other false. For when Socrates is one is true and the other false, but when he is not both are false: for neither does Socrates heal nor does he ail when Socrates himself is not at all...Now always in the case of affirmation and denial, whether [Socrates] be or not be,

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<sup>29</sup> There are no valid syllogisms with both premises negative. [An. Pr. I.24] So a valid syllogism will always have existential import for some of its terms. Aristotle shows little interest in the invalid forms like I EEE: what use would they have in science except in showing why a theory should be rejected? At 37a14-5 Aristotle asserts that ‘it is not possible that no S is P’ implies ‘it is necessary that some S is P’, but this is inconclusive. Also see the discussion of the syllogistic in the next Chapter.

<sup>30</sup> Anonymous, in *De Int.* 37,6-9, gives two readings of the O proposition: ‘not every’ as the denial of A or as making the existential claim ‘some not’.

one will be false and the other true: for it is evident that one of ‘Socrates ails’ and ‘Socrates does not ail’ is true or false when he is, and similarly when he is not: for when he is not, that he ails is false, and that he does not ail is true. [Cat. 13b14-33]

‘Socrates is not healthy’ is true both of a sick, existing Socrates and (rather metaphorically) of a Socrates dead some centuries. I have claimed that for Aristotle both ‘Socrates is healthy’ and ‘Socrates is sick’ (taken as statements of being *per se*) assert that Socrates exists. The two statements differ only in the mode of existence that they attribute to Socrates—as sick or as healthy. So, if Socrates exists, and exists as the sort of thing that can be healthy or sick, then exactly one of ‘Socrates is healthy’ and ‘Socrates is sick’ is true. If Socrates does not exist, they both are false, and conversely, if they are both false, then Socrates does not exist. Both ‘Socrates is not sick’ and ‘Socrates is not healthy’ are true if Socrates does not exist. Thus, Aristotle supports here the claim that simple affirmations require that their subjects exist, whereas simple denials do not.<sup>31</sup>

However, what Aristotle says about Homer seems to contradict this conclusion:

Homer is something, say, a poet. Is it therefore true that he is, or not? For ‘is’ is predicated accidentally of Homer. For ‘is’ is predicated of Homer because he is a poet, but not in virtue of itself. So in whatever predications in which there is no contrariety, when definitions are said instead of names, and which are predicated in virtue of themselves and not in virtue of an accident, in these it will be true to say the particular also without qualification. But it is not true to say that the non-existent is something existent because it is imaginary. For the imagination of it is not that it is, but that it is not. [Int. 21a18-33]<sup>32</sup>

Aristotle says that ‘Homer is a poet’ is true, while ‘Homer is’ is false. Then ‘Homer is not’, i.e., ‘Homer does not exist’ is true. Also ‘Homer is not a poet’ is false. But if Homer does not exist, according to what Aristotle says

<sup>31</sup> Vittorio Sainati, “Die Kategorien und die Theorie der Prädikation,” p. 43.

<sup>32</sup> William Jacobs, “Aristotle and Non-Referring Subjects,” pp. 288-9, claims that Aristotle is not concerned here with the *secundum quid ad simpliciter* inference, but his position depends on an indefensible translation of 21a18-33. Michael Wedin, “Aristotle on the Existential Import of Sentences,” pp. 186-8, has a position consistent with mine, and further argues that this passage does not deal with existential presuppositions, against the view of M. Thompson, “On Aristotle’s Square of Opposition,” pp. 55-7. Also see R. M. Dancy, *Sense and Contradiction*, pp. 153-5. Sten Ebbesen, “The Chimera’s Diary,” p. 116, suggests that 21a33 be read “...is not because it is, but because it is not”—following Boethius’ translation of ‘quia’ for ‘ὅτι’. But Boethius regularly uses ‘quia’ to indicate the construction of indirect speech. Also cf. Hermann Weidemann, *Peri Hermeneias*, pp. 387-8. See Allan Bäck, *On Reduplication*, Chapter Three for a more extensive analysis of this paralogism.

in the *Categories*, ‘Homer is a poet’ should be false, and ‘Homer is not a poet’ true.

Aristotle states the solution to this problem explicitly. He says that ‘is’ is predicated of Homer not *per se*, but *per accidens*. [21a28-31] Then ‘Homer is a poet’ too is not a statement of being *per se*. What else can it be? Like ‘not-being is’ and ‘not-being is thought about’, it is not a statement of being *per se* but a predication of being *per accidens*. Here no existential import is required for the subject.<sup>33</sup> After all, if we wanted to make a statement of being *per se* for Homer, at best we could say, with ampliation, ‘Homer was a poet’.<sup>34</sup> So too ‘Socrates is healthy’ may be true, when taken as a predication of being *per accidens*. For thus we may today describe Socrates’ condition in the past. As I have suggested, being *per accidens* may be identified with the later Aristotelian being *in intellectu*.<sup>35</sup> The Aristotelian tradition of speaking about knowledge of the past in terms of phantasms in the present agrees with this reading.<sup>36</sup>

### *Metathetic Denials*

When the negation is attached to the predicate complement, so as to constitute a complex, later called the metathetic predicate,<sup>37</sup> Aristotle says that the statement consists in a affirmation, a predication of that (metathetic) complex of the subject. [51b33-4; 52a24-6] E.g., in ‘man is not-just’, ‘not-just’ is predicated of ‘man’. This is not a negative statement:

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<sup>33</sup> William Jacobs, “Aristotle and Non-Referring Subjects,” pp. 266-9, holds that Aristotle grants existential import only in essential predication. Hence ‘Homer is a poet’ makes no existential claim, and so the inference to ‘Homer is’ fails. This conclusion conflicts with his pp. 285-6 where he says that a statement has existential import when it connects one real being to another.. On Jacobs, see too Peter Simpson’s comments, “Aristotle’s Theory of Assertions,” pp. 84-7. Michael Wedin, “Aristotle on the Existential Import of Singular Sentences,” p. 186, says that ‘is’ is predicated *per accidens* but that the sentence itself does not express a *per accidens* predication. Cf. his p. 182: “In these occurrences, ‘κατὰ συμβεβηκός’ functions as an adverbial modifier on the action or process introduced by the infinitive. It should not be taken to suggest that the object of the action or process is an action.” So for him “Phidias is artistic” is not a mode of ‘κατὰ συμβεβηκός’ predication; on my view it could be.

<sup>34</sup> It is no solution to distinguish ‘healthy’ and ‘poet’ on the grounds that the former requires life while the latter does not: dead poets write no poems today.

<sup>35</sup> Aristotle himself seems to have such a notion at *Metaphysics* 1032b1; *On Interpretation* 16a3. Ammonius, in *De Int.* 162,32-3, recognizes predication *in re* and *in intellectu*.

<sup>36</sup> Cf. Deborah Modrak, *The Power of Perception*, pp. 82-107.

<sup>37</sup> Alexander, in *An. Pr.* 397,2-4, notes that Theophrastus gave it this name.

Nor are 'is not-equal' and 'is not equal' [the same]: for something is a subject for 'is not-equal', and this is the unequal, whereas nothing is the subject for the latter. [51b25-7]

Further he says that the metathetic predicate, 'is not-equal', (*εἶναι μὴ ἴσον*) has a subject underlying it, while "is not equal" (*μὴ εἶναι ἴσον*) does not. Aristotle then compares the metathetic predicate ('not-equal') to the privative predicate ('unequal'). [52a15-7; *Topics* II.8] Privatives have an underlying subject, and cannot be said of everything: "Wherefore not everything is equal or unequal, but everything is equal or is not equal." [51b27-8] For privatives must be said only of those objects capable of receiving the corresponding positive attribute ('equal'). So privatives belong only to things that exist, and not even to all of them. [*Cat.* 12a26-34]

In linking metathetic predicates with privative terms, Aristotle does not exactly say that they are synonymous or even coextensive, but only that they "hold similarly with reference to the affirmations through this arrangement" (sc., the square of opposition). They are not coextensive: the unequal is not-equal, but the not-equal need not be unequal. Only part of what is other than what is equal admits the contrary, 'the unequal'. Metathetic and privative expressions agree in forming complex predicates asserted of the subject as a unit. So the negation of the predicate complement ('P') in a statement of *tertium adiacens* yields an logical affirmation with a metathetic predicate ('not-P' is predicated of S).

But grouping metathetic predicates with privatives presents problems. Metathetic predicates appear to be the same as indefinite names. For, when the predicate complement is a noun, the metathetic predicate becomes identical in grammatical form (in Greek) to the indefinite name. E.g., in 'Socrates is a not-dog', 'not-dog' is a metathetic predicate, and Aristotle holds too that 'not-dog' is an indefinite name. Likewise, Aristotle describes indefinite names with the privative expression, "non-names". [19b6] Aristotle restricts privatives to what exists, while indefinite names apply to what does not exist as well as to what exists.<sup>38</sup> Aristotle has claimed that something is the underlying subject for 'is not-equal', namely the unequal. In contrast, he has said, a simple denial has no underlying subject, presumably because the simple denial can apply both to what exists and to what does not exist. But too Aristotle has said that an indefinite name describes both what does not exist and what exists in various ways, and these types are too disparate to form a unity. So it too should have no underlying subject.

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<sup>38</sup> Ammonius, in *de Int.* 263,10-264,7; 299,24-7, takes 'not-S' to apply to what is not receptive of S etc., but not to what does not exist at all, along the lines of the *Sophist* and the *Philebus*, which he cites. The problem is that Aristotle seems to describe indefinite names otherwise.

Then, on the same grounds, its predication should make no existence claim. Indeed, Aristotle says that an indefinite name “signifies what is somehow one in an indefinite way. [19b10] Hence he implies that an indefinite name does not name a “definite” subject, one with an underlying unity.

Aristotle then seems to have two separate accounts of the metathetic predicate: one where it has an underlying subject and is restricted to what exists; the other where it has no underlying subject and is not restricted to what exists. But he shows no indication of having two accounts.<sup>39</sup>

What I have said before solves this problem. An indefinite name has the same lack of unity as a simple denial. But, when predicated in an affirmative statement of being *per se*, its subject is restricted to what exists, if the statement is to be true. So the predication of an indefinite name (‘is not-P’), not the indefinite name itself (‘not-P’) is the metathetic predicate. This has the underlying subject and unity like that of the privative.<sup>40</sup> Aristotle does say “is not-equal” and not “not-equal” alone. To be sure, Aristotle would be inclined to focus on metathetic predicates in statements of being *per se*. In such contexts the metathetic *predications* would have existential import.<sup>41</sup> Along these lines, Aristotle generally takes ‘not-being’ as what is outside of being to solve the Parmenidean puzzles about not-being, as we have seen in Chapter Two. In this way too he would be motivated to accord existential import to metathetic statements, and take them as logical affirmations.

Similarly, an indefinite name used as the subject in a statement of being *per se* makes an existence claim, and is to be taken concretely. Then it too will have an underlying subject. [19b9]

This solution agrees with the aspect theory. For Aristotle does not say that ‘not-equal’ has an underlying subject, but that ‘is not-equal’ does. The expression, ‘metathetic predicate’, may mislead us to believe that it (‘not-P’) constitutes the whole predicate. Rather, it is part of the predicate, a further specification of ‘is’. As ‘is’ asserts existence, its presence rules out the metathetic “predicate” from signifying what does not exist. Apparently then those objects that exist and are other than the equal for Aristotle have

<sup>39</sup> M. Soreth, “Zum infiniten Prädikat in zehnten Kapitel der Aristotelischen Hermeneutik,” p. 408; 410-1, consequently distinguishes two concepts of the metathetic predicate, one restricted and the other non restricted; to the existent. He holds, p. 416, that in this text Aristotle uses the restricted sense only, but usually not.

<sup>40</sup> In effect some indefinite names may be used as privatives. But not all indefinite names are privatives: ‘not-being’ being the classic case—unless it be construed as Plato does in the *Sophist*.

<sup>41</sup> Cf. Alexander, in *An. Pr.* on 24b18; Philoponus, in *Phys.* 66,13-4. However, in cases like ‘the not-being is not-being’ [*Metaph.* 1003b10], the metathetic assertion has no existential import as it is an assertion of being *per accidens*.

enough unity for 'not-equal' to have an underlying subject. Still, 'unequal' seems to have more unity: it names a *relatum* of a subject that is capable of being equal or not. So not everything that is not-equal will be unequal. Strictly, then, an expression like 'not-equal' is not a metathetic predicate, a complete predicate or verb, but only part of a predicate ('is not-P'), i.e., a metathetic predicate complement.

As they are handled as a single unit, metathetic predicates, like subjects that are indefinite names, do not present much obscurity of logical structure. So long as the existence claim, made by 'is', given in the "additional predication" of the *tertium adiacens* is recognized, Aristotle's position remains clear. The presence of further negations, as in 'S is not not-P', may complicate the structure, but again presents no special difficulty, so long as the destruction of existential import by the simple denial is attended to first.

Note, however, that on the copulative theory of predication, when attributed to Aristotle, it becomes an utter mystery why Aristotle would say that 'S is not-P' is true only if S exists. For, if 'is' serves only as copula in a statement of *tertium adiacens*, then this metathetic affirmation asserts only that 'not-P' is predicated of 'S'. Now, at least on the term approach of the copulative interpretation, 'not-P' is (often) an indefinite name, that applies indifferently to what exists or what does not exist. Then 'S is not-P' could be true when S does not exist. Indeed, it *should* be true when S does not exist, when 'P' names an item in the categories. For, e.g., as a chimera is not an item listed in any category, a chimera is not-any-of-them.

Perhaps on the copulative theory we must "presuppose" the subject term to name a being in the categories. 'Presuppose' can be contrasted with 'imply': if A implies B, then the truth of B is required for A to be true; if A presupposes B, then the truth of B is required for A to be true or to be false. But, if it must be presupposed that all subjects have existential import then it becomes an utter mystery why Aristotle says that a simple denial is true if its subject does not exist. Further, if all subjects of affirmative statements must have existential import, what happens when indefinite names, like 'not-man' or 'not-being', are the subjects? These would have to be restricted to what exists, as other than man or *being*! Then any statement about not-being would be false.

In all of its versions, the copulative theory has to stipulate existential import, or give a complex story about the constituents of the subject term. For it the 'is' serves only to couple subject and predicate, with a temporal determinant. But then why does it do more in a statement of *secundum adiacens*, the form that Aristotle finds basic? Consequently, the copulative interpretation of Aristotle either makes him out to be inconsistent, in an incredibly obvious way, or is not a satisfactory interpretation. I choose the latter option, until forced to abandon it.



I have observed that a sentence with an indefinite verb, like ‘a goat-stag not-walks’, seems more like the metathetic predication, ‘a goat-stag is not-walking’, than the simple denial, ‘a goat-stag is not walking’. For the metathetic predicate complement can have the same grammatical form as the indefinite name. Indeed, the copulative interpretation looks forced to accept the identity of the indefinite name and the metathetic complement (sc., ‘is not-P’). But then it cannot explain how for Aristotle the metathetic denial has existential import, while a sentence with corresponding subject and indefinite verb does not. For Aristotle describes an indefinite name as holding indifferently of what exists and of what does not exist. On the aspect theory, though, the indefinite verb is not, strictly, identical to the metathetic predicate, because the metathetic “predicate” (complement) is only part of the whole predicate, and serves only to specify ‘is’ further. Rather, a sentence with subject plus indefinite verb either is equivalent to the simple denial (interpretation A), or is an affirmation of being *per accidens* (interpretation B). Grammatical appearances are deceiving.

One problem that re-emerges with metathetic denials is the attractiveness of the tripartite, term analysis as an interpretation of Aristotle’s views. On the aspect theory, the statement, ‘S is P’, is divided up into the name, ‘S’, and the verb, ‘is P’. However, in discussing negation, Aristotle is willing to negate not merely the name and verb, but more parts of the sentence. Thus, he considers negations of ‘is’ and negations of ‘P’. This approach might appear to favor the term analysis, the tripartite, subject-copula-predicate analysis of Aristotle’s theory of predication.

By itself, it does not. In considering negations of sentences comprehensively, any logician, especially one like Aristotle who stays in natural language, will have to consider the logical structures of negation at every possible point in the sentence. But to admit that the sentence may be negated at various points does not inevitably commit the logician to use those points as logical divisions for breaking up the sentence. For instance, consider ‘a dog runs quickly’. Aristotle seems willing to consider these various single negations of it ‘it is not the case that a dog runs quickly’; ‘a not dog runs quickly’; a dog does not run quickly’; ‘a dog runs not quickly’.<sup>42</sup> Now the first and the third of these are equivalent for Aristotle and for us. Moreover, the third and the fourth do differ: the third claims, as usually understood, that the dog does not run at all; the fourth claims that the dog runs but not quickly. On either the aspect or the copulative theory, Aristotle would say that ‘runs quickly’ is the predicate, regardless of the fact

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<sup>42</sup> And yet more variants, given the greater variability of word order in Greek than in English.

that the negation can be placed in different places in that expression with different results.

Consequently, the types of negations that Aristotle distinguishes do not, by themselves, favor the tripartite, subject-copula-predicate analysis, where the statement is divided up into two terms with a predication relation. What does suggest that analysis much more strongly is the conversion of statements, affirmative and negative, and the term approach of the syllogistic, as I shall discuss further in the chapter on inference.

So metathetic predicates are not generally indefinite names. Rather they are qualifying parts of the predicate: 'is not-just'; 'is a not-dog'. Nevertheless, as I have said, when the metathetic predicate is nominal, outside of a sentential context it will be an indefinite name, as with 'not-dog'.<sup>43</sup>

### *Squares of Opposition*

Aristotle constructs squares of opposition for various types of simple categorical propositions in accordance with these types of negation and his doctrines about them, both in *On Interpretation* 10 and in the cross-referenced *Prior Analytics* I.46.<sup>44</sup> Aristotle gives squares of oppositions for types of statements with both the tripartite and bipartite linguistic structures. For tripartite statements, he gives squares for the indefinite, as in '(a) man is just', for the universal, as in 'every man is just', for the indefinite having an indefinite name as subject, as in 'not-man is just', and for the indefinite having a metathetic predicate complement, as in 'a man is not-just'. He also mentions privative predicates, as in 'a man is unjust'. For bipartite statements, he gives squares for the universal, as in 'every man heals' and for the indefinite, as in '(a) man heals'.

What he says follows fairly easily from the views that I have discussed. As a simple denial ('S is not P') does not require that its subject exist, while the correlated metathetic denial ('S is not-P') does, and as both require that

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<sup>43</sup> Strictly, 'not-just' is not an indefinite name. For it is a paronymous expression, derived from 'justice'. When read concretely, it becomes an indefinite name.

<sup>44</sup> Some have doubts about the cross-reference. See Hermann Weidemann, *Aristoteles Peri Hermeneias*, p. 209; M. Soreth, "Zum infiniten Prädikat in zehnten Kapitel der Aristotelischen Hermeneutik," pp. 401-2. There is indeed a problem about how to arrange the squares of opposition in *On Interpretation* 10 so as to render them consistent with *Prior Analytics* I.46. Soreth, pp. 405-8, holds them to be inconsistent, unless we recognize two senses of infinite (metathetic) predicate: one applying both to what exists and what does not exist [*Int.*]; the other applying only to what exists [*An. Pr.*]. But Aristotle does not make this distinction explicitly. I forego a complete analysis here. But I claim that generally such problems arise from the copulative interpretation. See Chapter Nine where I discuss Ammonius.

the predication being made be denied, the metathetic denial, logically an affirmation, entails the simple denial, but not *vice versa*. [51b41-52a5] E.g., when 'man is not-just' is true, so is 'man is not just', but, when 'man is not just' is true, it need not be true that 'man is not-just' is true. For 'man is not just' can be true even if the subject term names nothing that exists, but the metathetic 'man is not-just' requires that man exists.<sup>45</sup>

Aristotle extends his doctrines to those cases where the verb is not 'is' simply but still is a single expression appearing to fill the role of both *secundum* and *tertium adiacens*. First, he treats such a verb, like 'heals' or 'walks', as having the syntactic features of negation like the copula 'is'. When it is negated, what is being denied is the predication of it of the subject; i.e., the entire proposition is being denied. [Int. 20a3] So 'man does not walk' (οὐ βαδίζει) means 'it is not the case that man walks'. Second, as in *Metaphysics* V.7, he offers a way to make the distinction of negating the *secundum* and the *tertium adiacens* explicit there: replace the verb with the copula and the correlative participle. [21b9-10; An. Pr. 51b13-5] So 'man walks' means the same as 'man is walking', and in the latter the negations may be placed just as in 'man is just'.

The ambiguity of the grammatical form obscures Aristotle's views. Aristotle reads expressions like 'not-walks' (οὐ βαδίζει) in several ways: 1) as a simple denial 2) as equivalent to a metathetic predicate 3) as an indefinite verb. On the first reading, the subject need not have existential import, as a statement of being *per se* is being denied. But the presumption, the default value, is that it does, because the terms used in scientific discourse all name items in the categories of being *per se*. On this presumption, the simple denial amounts to a "privative" as Aristotle says in his syllogistic. On the second reading, the subject has existential import: the metathetic denial is logically an assertion of being *per se*. On the third

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<sup>45</sup> See Hermann Weidemann, *Aristoteles Peri Hermenias*, pp. 207-9 for a survey and critique of the literature. Weidemann himself takes the position that Aristotle presupposes that the terms are not empty. The dominant view, e.g. by Manley Thompson, "On Aristotle's Square of Opposition," p. 60; Michael Wedin, "Negation and Quantification in Aristotle," pp. 135-9. R. M. Dancy, "Aristotle and Existence," pp. 426-8, et al. have the squares requiring existential import only for the affirmative forms.

Following Brentano, A. N. Prior, *Formal Logic*, pp. 166ff., develops an aspect theory as an interpretation of Aristotle, and has existential import for the affirmative but not the negative statements. He says, p. 169, that in *Prior Analytics* II.15 Aristotle claims that 'no A is A' and 'not every A is A' are necessarily false. This results follows if we suppose, as Aristotle does, that in science only names of items in the categories are used for terms. Or again, as I shall discuss further in the next chapter, Aristotle generally takes the negations metathetically in his syllogistic. We need not follow Michael Wedin, "Negation and Quantification in Aristotle," p. 139, here when he holds that relations of subalternation and subcontrariety fail for negative statements in the square of opposition.

reading, 'Socrates does not walk' has an indefinite verb and makes an assertion of being *per accidens*. This can be taken as equivalent to 'S is not-P', where 'is' is *per accidens*. Here the subject has no existential import. Aristotle excludes statements of being *per accidens* from his logic and science anyway.

Aristotle focuses on which statements are opposed to which, and how so. E.g., he seeks to determine whether opposed statements are contraries or (grammatical) contradictories, where by 'contradictories' he means a pair of statements having the grammatical form, 'S is P and S is not P'. I say 'statement' here in the logical sense where many sentences can express the same statement. E.g., Aristotle worries about whether sentences like 'not every animal is white' and 'some animal is not white' express the same statement. He also worries about which grammatical contradictories are logical contradictories, i.e., are such that they are of the form 'P and not P' and exactly one of the pair just be at the same time. E.g., this holds for 'Socrates is white and Socrates is not white' but not for 'a man is white and a man is not white'. Again, this holds for 'no man is white' and 'some man is white'. [17b18-9]<sup>46</sup> Aristotle focuses mostly on how these statements look and function in ordinary and technical discourse. He could have had much easier and simpler results if he had adopted a few conventions, e.g., to stipulate that grammatical contradictories are pairs of the form, 'P and it is not the case that P', for then all contradictories would be logical contradictories too.<sup>47</sup>

Aristotle takes the subject to be not merely the name, but the names plus all its modifiers. Likewise he takes the predicate to be the verb with all its modifiers. E.g., in 'every athletic man is a hairy, rare animal', the subject is 'every athletic man' and the predicate 'is a hairy, rare animal'. The point is that he makes non-categorical expressions like 'every' and 'rare' parts of the subject or predicate, although he is clear that 'every' does not signify as a categorical expression: "for 'every' does not signify the universal, but that it is universal." [20a9-10; 17b11-2] That is, in 'every S', 'every' qualifies 'S' so as to indicate that the following predication holds for every case of S. At 20a12-4 Aristotle says that "'every' or 'no' additionally signifies (προσσημαίνει) nothing but that the affirmation or denial of the name is universal." So again the quantifier concerns the predication and not the subject.<sup>48</sup>

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<sup>46</sup> Here 'no S is P' is to be read as 'not one S is P', i.e., as 'not (some S is P)'. Aristotle may have another reading of it for his syllogistic.

<sup>47</sup> Except for future contingent statements perhaps. See Allan Bäck, "Sailing Through the Sea Battle." We shall see the Stoics phrasing contradictories thus.

<sup>48</sup> I have argued that Aristotle has a similar use for *qua* phrases like *S per se* (S καθ' αὐτό) where the phrase looks attached to the subject but concerns the predication. See *On Redupli-*

To be sure, in the *Prior Analytics*, Aristotle breaks down a proposition into two terms, subject and predicate, that do not contain quantifiers, and will speak, say of the universal privative with terms A and B. [25a14; 26b22-4] So here it looks as if he has dropped ‘no’ or ‘every’ from the subject. But when he uses the ‘ὑπάρχει’ construction, he again makes it clear that the subject is ‘no B’ in ‘A belongs to no B’. [25a15]

Taking ‘every S’ and not ‘S’ as the subject supports the aspect theory. For it is hard to construe ‘every S is P’ as an unconditional assertion of existence unless ‘every S’ be taken as the whole subject. ‘Every S exists as a P’ is all right.<sup>49</sup> Remove ‘every’ from the subject term, and it becomes hard to assert existence simply and unconditionally. Of course, there is always: ‘for every thing, if it exists as an S, then it exists as a P’. or, perhaps, ‘S is always P’. But this seems much more tentative than the original statement. In any case, it would not qualify as a statement of being *per se*. Likewise, as I have remarked, Aristotle would also tend to reject qualifications of the predicate that do not specify it further, and so he rejects sentences like ‘Socrates is every man’.

I am not claiming that Aristotle became inclined to the aspect theory of predication through his view that the subject consists of the entire complex, quantifying modifiers and all, as in ‘every S’. Rather, I am claiming the reverse: the aspect theory explains why Aristotle would favor this analysis of the subject. In contrast, the copulative theory would equally support taking quantifiers to modify the predication relation signified by the copula: ‘every S is P’ as ‘P belongs universally to S’.

### *Conclusions*

I conclude that the aspect theory of predication explains well what Aristotle says about negations. We need not view the bipartite and the tripartite analyses as two rival, mutually incompatible theories. We can view them as two expressions of the aspect theory. Moreover, the aspect theory explains why Aristotle would so willingly assume that the logical subject consists of the name plus all of its modifiers, even when he is aware of the syncategorematic properties of quantifiers like ‘every’. In particular, the aspect theory has the advantage over the dominant, copulative theory as an interpretation of Aristotle’s views on negation that it explains why metathetic

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cation, p. 41. Note once again that ‘additionally signify’ has the statement make a further, second claim.

<sup>49</sup> I.e., ‘everything that exists as an S exists as a P.’ See the discussion of the modal syllogistic in the next Chapter.

predications ('is not-P') require the subject to exist. The copulative interpretation should hold that the subject need not exist. But it does not. E.g., Ammonius, one of its founders, as we shall see, says,

For nothing prevents something being predicated truly of the not-being as not belonging to it or naturally belonging to it as when I say 'the centaur is not healthy or is not sick'. But it is impossible for something to belong to the not-being.<sup>50</sup>

But why cannot a not-being have predicates truly affirmed of it, if 'is' serves merely to couple subject and predicate? If it can have these predicates, why should not metathetic predicates like 'not-real' be true of it, although Aristotle denies this? The aspect theory has the advantage here. To be sure, it does have the disadvantage that a simple denial ends up having disjunctive causes of truth. However, I have explained why Aristotle would not have viewed that as a major concern, and why we should not either.

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<sup>50</sup> Ammonius, in *De Int.* 52,13-6

## CHAPTER EIGHT

### INFERENCE

Once more I shall concentrate on the inferences that have a bearing on Aristotle's theory of predication, in particular, on those inferences whose validity depends on the details of which theory of predication is held, or whose validity Aristotle champions but is suspect from the viewpoint of modern classical logic. I shall show that Aristotle becomes a much more respectable logician if we ascribe to him the aspect theory of predication, as opposed to the copulative theory. I shall consider too the inferential connections between statements of the forms 'S is' and 'S is P'. These very connections sound strange and ill-formed to modern logical ears. But, I contend, in such strangeness the distinctive features of Aristotle's theory of predication lie.

#### *The Antepredicamental Rule*

In essential predication, both the name and the definition of the thing predicated are said of the subject. [2a19-20] So, if 'S is P' is an essential predication, both 'P' and the complex phrase defining 'P' may be predicated of S. In this way, since Aristotle's definitions are typically composed of a genus and *differentia* ('G-D') of the *definiendum*, and those in turn often have definitions, a chain of predication may be constructed: S is P, P is R, R is Q, ..., where all these essential predicates may be truly predicated of 'S'. Accordingly Aristotle advances the antepredicamental rule: "whenever one thing is predicated of another as [said] of a subject (ὡς καθ' ὑποκειμένου), all things said of what is predicated will be said of the subject also." [1b10-2]<sup>1</sup> I.e., 'S is P<sub>e</sub> and P<sub>e</sub> is G-D; therefore S is G-D'. Likewise, any component of the definition ('G-D') or anything following necessarily from it (*propria*) may be predicated (essentially) of the original subject 'S'.<sup>2</sup>

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<sup>1</sup> Cf. *Prior Analytics* 43b30-2; Alexander, in *An. Pr.* 302,14-6; *Topics* 122b7-10; 154b6-12; *Physics* 185a30-1: "All things are predicated of substance as of a subject."

<sup>2</sup> Porphyry, in *Cat.* 80,4-27. restricts the antepredicamental rule to "what is given in the definition (τὶ ἐσθιν)." By this he seems to mean, 20,23, that such predicates will be the species and the genera. Then he would be ruling out the *differentiae* and *propria*. Cf. Simplicius, in *Cat.* 51,30-1.

However, in accidental predication, Aristotle says, the definition is never predicated, and the name “usually” is not either. [2a27-24] A true predication of *tertium adiacens*, ‘S is P’, where P is an accident of S, would become false, if ‘P’ were replaced by its definition. E.g., ‘Socrates is white’ is true, and the definition of ‘white’ is, say, ‘the lightest color’. But ‘Socrates is the lightest color’ is false. This type of inference is generally called the fallacy of accident.<sup>3</sup>

So the antepredicamental rule, Aristotle says, does not hold for “accidental predication”, and there the fallacy of accident may occur: e.g., ‘Socrates is white; white is a color; therefore, Socrates is a color’. Later Aristotelians offers others instances of the fallacy of accident with syn-categorematic terms too: ‘Socrates is man; man is a species; therefore Socrates is a species’.<sup>4</sup> Aristotle does not worry about the latter type of inference, either in relation to the fallacy of accident or in relation to the antepredicamental rule. I have already remarked how Aristotle has regimented ordinary language to fit his ontology, and so ignores some types of statements, in particular those not have as subjects items in the categories, like second intentions (‘species’) and imaginary things (‘goat-stag’).

Aristotle’s remark, that the expression signifying an accident is *sometimes* predicated of the subject is curious. No doubt, he is thinking of cases like ‘white’, as he gives ‘white’ as an example of a quality. He might have made that remark because Plato et al. already had the custom of using terms like ‘white’ to signify the quality, whiteness. Given this use of terms like ‘white’, it is understandable why Aristotle makes this remark. For, on this usage, ‘white’, signifying the quality as well as the *quale*, is also predicated of the subject.<sup>5</sup>

Apparently Aristotle is saying that the antepredicamental rule does not hold for accidental predication, for in such predication the fallacy of accident can occur. This is the standard position held by the Greek commentators: the antepredicamental rule is valid only for essential predication.<sup>6</sup>

<sup>3</sup> It is not clear whether Aristotle himself would call such an example an instance of the fallacy of accident. He gives no example obviously like it when he discusses the fallacy of accident. Moreover, it seems to depend on taking ‘white’ ambiguously. But Aristotle says that ambiguity does not indicate the fallacy of accident. [*Soph. El.* 179b38-180a3] At best such examples are implied at *Sophistical Refutations* 168a40-b3 and *Prior Analytics* 1.36 & 38; Alexander, in *An. Pr.* 356,28-357,16; 362,25-35; 374,16-9.

<sup>4</sup> E.g., Porphyry, in *Cat.* 80,32-81,2; Philoponus, in *An. Pr.* 325,27-326,4.

<sup>5</sup> Cf. *Topics* 103b31-3; Simplicius, in *Phys.* 121,4-7.

<sup>6</sup> Porphyry, in *Cat.* 81,7; Simplicius, in *Cat.* 51,30-1; 52,9-14; 82,9-11; Ammonius, in *Cat.* 31,1-12; in *De Int.* 89,27-36; Philoponus, in *Cat.* 38,29; Boethius, in *Cat.* 175D-176D. However, Porphyry, in *Cat.* 113,17-25; 114,11-2; 124,6, hints at there being no fallacy when paronymous accidental terms are used; Simplicius, in *Cat.* 54,8-12, reports that Andronicus et al. said that the antepredicamental rule holds for all predications—all predications of being *per*



However, a difficulty arises with such examples as: ‘Socrates is white; white is a color; therefore Socrates is a color.’ Strictly speaking, the definition of ‘white’ is not ‘the lightest color’ but something like ‘having the lightest color’ or even ‘something having the lightest color’. But then replacing the name of the accident with its definition does seem to preserve truth. Then no fallacy occurs, for ‘having the lightest color’ is indeed predicated of Socrates. Yet Aristotle insists that in accidental predication, as in ‘Socrates is white’, the definition of ‘white’ cannot replace it, *salva veritate*. Aristotle thus appears silly. But his position is not silly, once we understand how his theory commits him to a move away from ordinary speech patterns.

As I have explained in Chapter Five, on Aristotle’s own theory, strictly speaking, ‘white’ is an expression derivative from ‘whiteness’. Aristotle uses ‘white’ sometimes as an instance of the category of quality. [1b29] However, in his most extensive treatment of quality, he says ‘whiteness’ and not ‘white’. In Greek often the concrete ‘white’ (τὸ λευκόν) may be used for the abstract ‘whiteness’ (ἡ λευκότης): Plato regularly uses ‘the F (itself)’ to speak of the F-ness, e.g., (αὐτὸ τὸ ἴσον). [*Phd.* 74a12] Aristotle himself seems to follow this usage at times, as in his remark that the name of the accident is *sometimes* predicated of its subject. Nevertheless, in Aristotle’s ontology, there are not two items, white and whiteness, but rather only the quality called ‘whiteness’, which, becoming an attribute of an object having that quality, is called ‘white’.<sup>7</sup>

Discussing paronymy Aristotle says:

Whatever differ by inflection are called paronyms: They have their appellation in virtue of the name, as the grammatical [man] from grammar and the brave [man] from bravery. [1a12-5]

As paronyms have appellation, they are called by names, and are real objects, not expressions.<sup>8</sup> The basic object is signified by an abstract name,

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*se*, as I shall hold. Ockham, *Expositio super libros Elenchorum*, 234,100-9, makes this point explicitly.

<sup>7</sup> Alan Code, “Aristotle: Essence and Accident,” pp. 428-9, claims that Plato too discovered the importance of paronymy in avoiding the Third Man argument via the self-predication assumption, that F-ness alone is F. For now individuals too can be F without being identical to F and having F essentially. Cf. *Sophist* 255ff.; Alexander Nehemas, “Self-Predication and Plato’s Theory of Forms.” Michael Wedin, “The Strategy of Aristotle’s Categories,” pp. 9-10, objects that strictly ‘white’ here is not a case of paronymy. I submit that the text is so sketchy that we have to make extensions of Aristotle’s doctrines, i.e., as in Chapter Five, to apply the paronymy program to all the categories.

<sup>8</sup> In this way, paronymy, like homonymy and synonymy, is a relation between objects. Cf. J. L. Ackrill, *Aristotle’s Categories and De Interpretatione*, pp. 72-3.

like 'grammar' and 'whiteness'; the derivative object by a concrete one, like 'white' and 'grammatical'. Aristotle uses the masculine singular definite article here (e.g., 'ὁ γραμματικός') to indicate that the derivative term signifies a man. So then paronyms are two objects referred to by two grammatically related terms.<sup>9</sup> In terms of Aristotle's theory of categories, the abstract, base term refers to an item in a non-substantial category, while the concrete, derivative term normally refers to a substance having that item. E.g., 'white' names the substance having whiteness, while 'whiteness' names the quality. 'The dog is white' is true, while 'the dog is whiteness' is false. In contrast, the (essential) predication of a species of a genus in any category requires that non-derivative terms be used. Thus Aristotle says that 'whiteness is a color' is true, while 'whiteness is colored' is false. [Top. 109a39-b12]

In the category of substance, the names used are concrete. Aristotle seems to view them as non-derivative. Sometimes, in the natural language, the derivative and the non-derivative expressions are the same. Hence "sometimes" the name signifying the accident is "predicated of" the subject. [Cat. 2a29-34]

But what would Aristotle say about 'slavery' and 'slave'? He says that 'slave' names the relation, and does not use abstract terms at all in discussing relations. [6b29]<sup>10</sup>. So too Aristotle does not use an abstract term like 'humanity' or its equivalent ('being human') in the *Categories*.<sup>11</sup> However in the *Metaphysics* he does seem to recognize and use these different forms when discussing the relation between a thing and its essence. There he speaks of, e.g., 'cloak' and 'man', versus 'being a cloak' and 'being a man'. [Metaph. 1029b16-22; De Anima 429b10-25]<sup>12</sup> Aristotle often expresses essences of accidents too in this way; e.g., the essence of white by 'being white' ('εἶναι λευκῶ'). [Metaph. 1031b18-1032a11] Aristotle makes and uses this distinction between the concrete and the abstract form more and more as his own philosophy develops.<sup>13</sup> So, I trust, despite the difficulties,

<sup>9</sup> 'Inflection' here is meant to be taken in a general sense. Cf. Anonymous, in *De Int.* 2,10-3,5.

<sup>10</sup> Mario Mignucci, "Aristotle's Definition of Relatives in *Categories* 7," p. 104, takes the expressions signifying relatives there to signify "the predicate". If we make explicit the implicit 'is' implicit in predicate position, we would have an abstract term there too ('being a slave').

<sup>11</sup> Perhaps because of the objection made at *Parmenides* 133E ff.

<sup>12</sup> Aristotle generally uses the construction, 'εἶναι' plus the dative of 'S', to speak of the essence of some thing S. The dative is suggestive of the 'ὑπάρχει' construction, which I have discussed above.

<sup>13</sup> Abstract terms do not appear frequently until later Greek philosophy. Earlier on, as in Plato, abstractions were signified often by the definite article and the concrete noun.

Aristotle does always want his paronymous distinction between the abstract and the concrete term.<sup>14</sup>

In light of this doctrine we can see why Aristotle would view accidents to hold predicate position naturally. 'White' does not name the quality; rather 'whiteness', or the more usual 'being white', does. Now Aristotle at times takes the infinitive phrase, 'being white' as equivalent to the predicative, 'is white'. Hence Aristotle would be inclined to treat a paronymous term appearing in predicate position with the implicit 'is' as the abstract name. Indeed he does so, when he calls 'rational' and 'terrestrial' the *differentiae*, and likewise when he calls terms like 'white' verbs. [*Cat.* 3a22-8]

Again, in the *Metaphysics* he says that a substance like 'man' is identical to its essence, like 'being man'. [1031b19-20] Then 'man' and 'humanity' signify the same, and so could not be paronymous since their referents do not differ. So substance differs from the other categories in not having paronyms. This difference might explain why Aristotle does not use abstract substance terms like 'humanity' in discussing the categories.<sup>15</sup> But it does not explain why he does not use terms like 'slavery'. Thus, it appears, Aristotle does not always apply his own doctrine of paronymy, explicitly anyway—perhaps due to the brevity of the text.

Aristotle has said that paronyms differ by inflection. For this to be consistent with his doctrines about names in *On Interpretation*, Aristotle has to hold that what is signified by the abstract noun has the name, while what is signified by the concrete noun has only an inflection of the name. This fits, since strictly a term like 'white' cannot signify a subject; only 'whiteness' or 'a white thing' can. Since 'white' cannot be a subject term, it cannot be a name signifying an item in the categories i.e., be a being *per se*. Strictly, then, the items in the categories are all given by names and verbs, and not by their inflections. However the problem arises that paronyms are supposed to be real objects and not expressions or names. How can there be two beings, white and whiteness, if white does not appear in a category? Perhaps because white is the complex object, the thing having whiteness. The paronyms then are the accident (whiteness) and the complex object, the substance having that accident (the white thing). Still why does Aristotle use the grammatical notion of "inflection" when speaking about these objects? I can only hazard the guess that Aristotle expresses

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<sup>14</sup> Sheldon Marc Cohen, "'Predicable of' in Aristotle's *Categories*," pp. 69-70, sees a similar problem also with the predication of 'a stonecutter'. But I see no special difficulty here: like 'white', 'stonecutter' is the derivative term, '(thing) having the art of stonecutting'. Cf. too Gareth Matthews, "The One and the Many."

<sup>15</sup> In Chapter Five I have used paronymy to explain why *differentiae* and *propria* of substances are not in the category of substance.

himself too succinctly. He is talking of the expressions, the names and perhaps verbs, that signify paronyms. Given the mirroring of reality by his protocol language, he then is also speaking of the real objects signified by them.

These results support the conclusion of the previous chapter, that Aristotle does not accept the copulative interpretation of a statement of *tertium adiacens* as consisting of subject-(mere)copula-predicate. For then 'Socrates is white' would be analyzed as 'white is predicated of Socrates', and that would be taken to mean that a certain quality belongs to Socrates. But 'white' does not signify a quality. Rather, 'is white', or 'being white', or 'whiteness', does.

So I claim that Aristotle, when speaking strictly, has to distinguish between paronymous names, and hold that the name of an accident, which has an abstract form, is never predicated truly of a substantial subject.<sup>16</sup> Indeed, when he discusses quality more extensively, Aristotle does distinguish sharply between the abstract term designating the quality, like 'whiteness', and the term derived paronymously from it, 'white':

Those stated above are the qualities, while the *qualia* are those said paronymously in virtue of these or in some other such way from these. In most cases, even nearly in all, they are said paronymously, like 'white [man]' from 'whiteness', and 'grammatical [man]' from 'grammar', and 'just [man]' from 'justice', and likewise for the other cases. In some cases on account of there not being available names for the qualities it is not possible for them to be said from them paronymously... Other times, even when the name is available, the *quale* said in virtue of it is not said paronymously... [10a27-b7; cf. 6b11-4]

So qualities of the category are usually signified by abstract terms; their associated *qualia*, derived paronymously from them, are predicated of a subject, in the category of substance. Instances of the two exceptions in the category of quality are 'boxer', in the sense that someone is said to have a talent for boxing, by nature and not by training, and 'good' respectively. We have also noted exceptions in other categories like 'slave'. Aristotle is noting that there is no name in the ordinary Greek language presently for boxing-ability, and that 'good' is the *quale* for 'virtue'. Here, as in his remark that sometimes the name of an accident is said of a subject, Aristotle shows his awareness of common usage. However, I have claimed that in developing his own position Aristotle develops a technical vocabulary that departs from common usage. In this sense, at least, Aristotle's thought is

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<sup>16</sup> G. E. L. Owen, "The Platonism of Aristotle," p. 210.

developmental: starting from ordinary language he is creating his technical language.

Aristotle's point, that names for qualities and *qualia* must be sharply distinguished, will have to hold for all predicates, not just for those of quality.<sup>17</sup> Even expressions like 'in the market' must have both a concrete form ('in the market') and an abstract one ('in-the-market-hood', or, more usually in Aristotle's usage, 'being in the market'). Thus, even though Aristotle does not always apply his doctrine about the names of items in the categories ('boxer') and his doctrine of paronymy ('slave'), we shall excuse him on the grounds of brevity and conformity to ordinary usage, and take him to hold, strictly these doctrines to apply always and uniformly.<sup>18</sup>

I claim then that Aristotle's doctrine of paronymy has great importance for his theory of predication and doctrine of being.<sup>19</sup> For he holds that, strictly, all item in non-substantial categories are named by abstract expressions, and that all their expressions predicated of a substantial subject are concrete expressions derived paronymously from them. In contrast, all items in the category of substance are both named by concrete expressions and are themselves predicated (at least "unnaturally" for the singulars). Substance and the other categories differ in whether or not a predication of their names requires using a paronymous term. It is the category of the thing named, whether it is accidental or substantial and not the type of predication, accidental or essential, that determines this. For some items in the non-substantial categories are predicated essentially of a substantial subject, namely the *differentiae* and the *propria*. But even these require a paronymous term: Xanthippe is not rationality but rational. So strictly the name of the *differentia* is not predicated of the subject. Rather an inflection of that name is. When Aristotle says otherwise at *Categories* 3a25-6, he means that the *differentiae* and *propria* are predicated in the loose sense in which 'white' etc. is predicated of the subject. This supports my distin-

<sup>17</sup> Alexander, in *An. Pr.* 359,22-8: "...the predications (κατηγορίαι) of terms arise in all inflections. For not all predicates are predicated as of a subject: since all premises would need to have terms arranged in direct inflection, as with 'man is an animal'; 'grammar is knowledge'; 'color is a quality'. But since not only those predicated of a subject are predicated, but also the accidents that are in a subject, whose predications are not always in direct inflection..." Cf. Simplicius, in *Cat.* 174,19-24.

Alan Code, "Aristotle: Essence and Accident," p. 429, agrees that the doctrine of paronymy applies to all categories. However, Porphyry, in *Cat.* 140,9-10, makes the distinction for quality but, 87,8; 127,25-30, denies that Aristotle makes it for the other categories. But then at 92,24-34 he says that man is said to be three cubits paronymously.

<sup>18</sup> His favorite way of indicating the abstract name is with the infinite 'εἶναι' and the dative. See Chapter Four, note 22.

<sup>19</sup> And is fairly coherent despite the charges of Riek Van Brennekom, "Aristotle and the Copula," pp. 7-8.

guishing accidental and essential predication from accidental and essential predicates (or names).<sup>20</sup>

Indeed, in his syllogistic, Aristotle states the terms for the premises with abstract names, while insisting that paronymous, concrete names be used when they are put into statements. [*An. Pr.* 48a24-8]<sup>21</sup> In contrast, in discussing the antepredicamental rule, Aristotle insists upon using the original, abstract names for accidents. Then a fallacy of “accident” does result.

So I have argued that to explain his remarks on the antepredicamental rule and the fallacy of accident, Aristotle has to distinguish sharply between paronyms and further to use both concrete and abstract forms of expressions.<sup>22</sup>

Let us now return to the antepredicamental rule and the fallacy of accident. Aristotle says that in accidental predication, the definition and usually—or more accurately always—the name of the thing predicated are not predicated of the subject. E.g., whiteness is a color, but neither the definition of whiteness nor the name ‘whiteness’ is predicated of a subject like Socrates. Rather, only a derivative term, ‘white’ is so predicated. But note again that nothing seems to prevent the definition of that derivative term from being predicated truly of the subject. E.g., if Socrates is white and the definition of ‘white’ is ‘having whiteness or ‘having a white color’, then it follows that Socrates has a white color.<sup>23</sup> But by calling ‘white’ derivative, Aristotle has eliminated it from his ontology and from his philosophical protocol: ‘white’ does not signify a real object; only ‘whiteness’ does; hence ‘white’ cannot belong to scientific discourse. Fallacy occurs since ‘white’, when predicated of ‘Socrates’ is treated as a derivative term, meaning ‘having whiteness’, whereas, in ‘white is a color’, ‘white’ is taken non-derivatively, to mean ‘whiteness’. For what is a color is not the thing that is white, what exists or is as white, but whiteness. Now the fallacy of accident seems to depend on the ambiguity of the predicate term.<sup>24</sup> The

<sup>20</sup> Cf. Peter Strawson, *Individuals*, p. 143: “‘Raleigh smokes’ or ‘Raleigh is a smoker’ is talking about smoking and that one of the things he asserted about it was that Raleigh smoked or was a smoker.”

<sup>21</sup> See the discussion of conversion below. Another reason for excluding accidents named abstractly from the antepredicamental rule is suggested by 48a22-3: when things belong to the same thing, they can belong to each other. But accidents cannot belong to each other without an underlying subject.

<sup>22</sup> Likewise John Cook Wilson, *Statement and Inference*, Vol. 1, p. 116, claims that what is predicated (‘hardness’) is not the same as the predicate (‘hard’). The predicate is “what the subject is asserted to be.”

<sup>23</sup> See Edgehill’s n. 1 on *Categories* 5. Again, Ernst Tugendhat, *TI KATA TINOS*, pp. 41-2, holds that the paronym in the accidental predication (‘white’) can be said “as of the subject”.

<sup>24</sup> On the fallacy of accident, see Allan Bäck. “Philoponus on the Fallacy of Accident,” pp. 139-43.

ambiguity stems from the way in which Aristotle's predecessors like Plato have customarily used derivative terms. Further, since, strictly speaking, in Aristotle's protocol language, 'white' has only the quality, whiteness, to refer to, we can see why Aristotle denies that 'white' has its definition predicated of the subject.

Aristotle himself appears to acknowledge such exceptions to the antepredicamental rule and gives a general criterion for excluding them when he says that the predication must be "as of a subject" (ὡς καθ' ὑποκειμένου). [1b10-1] In light of *Categories* 2, he seems to be restricting the rule to essential predication. He claims in *Categories* 5 that the species man with its definition is said of the individual man [2a19-26] and so too the genus [2a36-7] and the *differentiae* [3a18-28] and presumably the *propria*. [Top. 102a18-20] Now, to be sure, the fallacious instances of this rule have in common their accidentally predicating a derivative term. But the mistake cannot come from predicating a derivative term. For recall that (essentially) predicating a derivative term like 'rational' or 'risible' occasions no fallacy and that Aristotle puts them into an accidental category. *Differentiae* ("rational") and *propria* ('risible') are paronyms too, and so fall under the same strictures: Xanthippe is not rationality but rational. In contrast, 'man' or 'animal' has no such paronym. Nor should Aristotle restrict the antepredicamental rule to essential predication. For, once the predication of derivative terms is allowed, no fallacy occurs with a normal accidental predication, as in 'Socrates is white'.<sup>25</sup>

How then should we interpret Aristotle's restriction of the antepredicamental rule to what is "predicated of another as of a subject"? This presents a real difficulty, not only for the aspect theory of predication but for any interpretation of Aristotle.<sup>26</sup> We cannot restrict it to predicates signifying items in the category of substance or to those that are not paronyms, as Aristotle takes it to hold for *differentiae* and *propria*. We should not take it to apply only to essential predication as it seems to hold equally well for accidental predications of paronymous terms, like 'white'. The fallacy of accident occurs equally well with *differentiae* as with common accidents: e.g., 'Socrates is rational, and rational is a quality'.

I can see two possibilities: 1) keep the restriction of the antepredicamental rule to essential predication of substance terms.<sup>27</sup> The rule then would

<sup>25</sup> Michael Wedin, "The Strategy of Aristotle's *Categories*," pp. 14-6. Avicenna, *Al-Maḳūlāt*, 26, 11-6; 43, 12-44, 20. notes this too, and concludes that the *Categories* text is puerile: he does not let Aristotle have the abstract form as basic.

<sup>26</sup> J. L. Ackrill, *Aristotle's Categories and De Interpretatione*, p. 86.

<sup>27</sup> Like, e.g., Alan Code, "Aristotle: Essence and Accident," p. 421; Vittorio Sainati, "Die Kategorien und die Theorie der Prädikation," pp. 69-70; José Miguel Gamba, "La Regla

have an artificially limited scope. But we have another option: 2) allow the antepredicamental rule to apply to all statements of being *per se*, whether accidental or essential. This interpretation requires taking “predicated of a subject” and ‘said of a subject’ not in the sense just put forward in *Categories* 2, but in a more general sense, applicable to all predications of being *per se*. Aristotle does use these expressions thus elsewhere. [*Top.* 127b1; 132b20]<sup>28</sup> In this way, the restricting phrase, ‘as of a subject’, might be taken to signify all categorical predication of being *per se*, essential and accidental. Aristotle sometimes talks this way: all items in the other categories are predicated of substance as their subject. [*Metaph.* 1029a23-4; 1029a8-9] But the immediate context of the *Categories* suggests otherwise. For he seems to single out *differentiae* as being special in having their definitions predicated of the subject, and says that this never happens for those that are in a subject. [2a27-9] Now strictly this will hold on the second interpretation: for items like ‘whiteness’ will never have their definitions predicated, although ‘white’, taken concretely and paronymously, will. The phrase “as of a subject” would then restrict predication to concrete terms of items in one of the categories. It would allow the predication of ‘white’ and ‘rational’, but not of ‘rationality’ and ‘whiteness’, as being “as of a subject”. Thus “as of a subject” would signify paronymy.<sup>29</sup>

In short, items in accidental categories have abstract names. When they are predicated of a subject in a statement of being *per se*, they have to be named by the concrete names. When the concrete names are predicated of a subject (in the category of substance) in a statement of being *per se*, the antepredicamental rule holds. However strictly these names do not signify anything in the categories.

I favor this second interpretation as it does keep Aristotle consistent. Yet it does so at the cost of ignoring the technical sense of ‘said of’ in *Categories* 2. Moreover, the discussion of *differentiae* at 3a21ff., where Aristotle seems to tie being in a subject to not having its definition predicated of that subject and so to not satisfying the antepredicamental rule,

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Aristotelica de Resolucion de Predicados,” pp. 85-6. James Duerlinger, “Predication and Inherence in Aristotle’s *Categories*,” p 189; 196, and also Terry Penner, *The Ascent from Nominalism*, pp. 302-3, have a variant of this view: he holds that the antepredicamental rule applies to all ‘said of’ relations, in all categories, but does not hold for, e.g., ‘white’, because it does not name an item in the categories. Cf. too Michael Rohr, “Aristotle on the Transitivity of Being Said of.”

<sup>28</sup> Montgomery Furth, “Transitional Stability in Aristotelian Substances,” p. 626, n. 2. In opposition Ravi Sharma, “A New Defense of Tropes,” p. 312, insists that ‘λέγεται κατά’ is always used in the *Categories* to indicate essential predication.

<sup>29</sup> “As of a subject” might also indicate a restriction to predicates in the nominative case. Cf. *Prior Analytics* 49a4.



would lose much of its point. For this observation would not say much if all those that are present in a subject may be predicated of a subject both in name and in definition. Still, the text of the *Categories* is brief, choppy and probably a compilation of texts written at different times. So I think that this objection is not fatal.

Moreover, a strong advantage of the second interpretation is that it makes the antepredicamental rule amount to the *dictum de omni*: "Now that one thing is in another as a whole and that one is predicated of all of another are the same." [24b26-8]<sup>30</sup> That rule allows transitivity of predication for all predications of being *per se*, whether accidental or essential. Otherwise the syllogistic would not apply to predicates like 'is white'. But Aristotle clearly thinks that it does, if we judge from the examples of syllogisms that he uses. Note that Aristotle uses the same phrase, 'predicate of' (κατηγορεῖσθαι κατὰ) in stating the *dictum de omni* as he does in stating the antepredicamental rule. [Cf. Alexander, in *An. Pr.* 24,29-30]

Likewise, the antepredicamental rule resembles the Barbara syllogism, the first form of the first figure: 'all A are B; all B are C; therefore all A are C'. [*An. Pr.* 25b32-5]<sup>31</sup> Again, this syllogism is valid for other types of predication beside the essential. Indeed Aristotle recognizes this in using the 'ὑπάρχει' construction that includes both accidental and essential predication.<sup>32</sup> Moreover, he describes that syllogism as consisting in a part contained in a whole, which in turn is a part of another whole.<sup>33</sup> Hence he bases the Barbara syllogism, on the *dictum de omni*, on the transitivity of a part-whole relation, and not explicitly on views about predicates of predicates. A part-whole relation can occur via essential (dog-animal) or accidental (brown dog-brown) predication.<sup>34</sup> Accordingly, although Aristotle is

<sup>30</sup> Alexander, in *An. Pr.* 53,19-21, takes 'of every' and 'in a whole' to state two different principles, but then concedes, 54,2-5, that they are the same.

<sup>31</sup> Simplicius, in *Cat.* 52,7-9, sees the antepredicamental rule to be a Barbara syllogism. On the relation between the *dictum de omni* and the antepredicamental rule see Robin Smith, *Prior Analytics*, p. 111.

<sup>32</sup> Thus Günther Patzig, *Aristotle's Theory of the Syllogism*, p. 51, holds that the syllogistic is based on the transitivity of the 'ὑπάρχει' relation. Richard Patterson, "Aristotle's Perfect Syllogisms, Predication, and the *Dictum de Omni*," p. 359, says that "Aristotle nowhere explicitly formulates or names such a principle..." but then at p. 373 in effect attributes to Aristotle the implicit assumption of the antepredicamental rule, taken to apply to all statements of being *per se*.

<sup>33</sup> Alexander, in *An. Pr.* 25,9-11, equates 'of every' with 'in a whole', but says that the former begins from the predicate and the latter from the subject.

<sup>34</sup> Just how much Aristotle bases the syllogistic on the *dicta de omni et de nullo* is a matter of controversy. See Richard Patterson, "Aristotle's Perfect Syllogisms, Predication, and the *Dictum de Omni*," pp. 359-60, for a critical survey, and Mario Mignucci, "Aristotle's Theory of Predication," pp. 5; 8, on the part-whole relation here. Also W. V. O. Quine, *Word and Object*, p. 60.

unclear, it is best to understand him to restrict the antepredicamental rule to predication of being *per se*, and not to essential predication.

### *Subalternation*

A common modern criticism of Aristotelian logic objects that at best it ignores stating explicitly some of its assumptions: in particular, the existential import assumption, sc., that all terms used in syllogistic must refer to at least one object.<sup>35</sup> This neglect appears quite vividly in the inference from a universal affirmative (A) to a particular affirmative statement (I), from 'every S is P' to 'some S is P'. The same problems arise also for the inference from a universal negative (E) to a particular negative (O). These two inferences have the common name of 'subalternation'. In modern classical logic, the universal statement is symbolized as a conditional without existential import: 'if something is an S, it is (not) a P', while the latter is an existential conjunction: 'there exists something that is S and is (not) P'. The inference then is invalid without a subsidiary hypothesis, that there exists at least one S.<sup>36</sup>

I have already explained why Aristotle does not need an explicit existential import assumption. First, on the aspect theory every affirmative statement states existence explicitly anyway. Second, for there to be a true statement asserting being *per se* an expression naming an item in the categories must be the subject. But as the categories contain only objects that exist, existential import is assured so long as we limit our vocabulary. So too in modern classical logic, once the existential import assumption is announced to be dispensable, it is then usually stipulated that all predicate functions are correlated with non-empty sets in the domain, so that existential import is assured anyway.<sup>37</sup>

Despite its traditional tie to the square of opposition, Aristotle does not discuss subalternation much at all in *On Interpretation*. More direct evidence for the A to I inference lies in the *Prior Analytics*. There Aristotle does not give an explicit proof of the inference from 'every S is P' to 'some S is P', but to 'some P is S', where subject and predicate complement are reversed. But given the inference from 'some P is S' to 'some S is P',

<sup>35</sup> Jan Łukasiewicz, *Aristotle's Syllogistic*, pp. 46-7; 130; Jonathan Barnes, "Terms and Sentences: Theophrastus on Hypothetical Syllogisms," pp. 316-7. See I. Dupont, "Zwei Typen von Systemen der traditionellen Logik," p. 276, for different ways to formulate the existential import condition.

<sup>36</sup> That is, on the modern view, 'every S is P' is consistent with 'no S exists'. The modern position has its own problems, so advocates of free logic claim. See the next Chapter.

<sup>37</sup> E.g., Benson Mates, *Elementary Logic*, p. 56.

which Aristotle does prove explicitly [25a20-2], the proof is there when he discusses conversion. As the latter inference is innocuous, I shall discuss the inference to the equivalent ‘some S is P’.

Aristotle says:

Now if A belongs to every B, also B will belong to some A: For if it belonged to no [A], then A will belong to no B. But it was supposed to belong to every [B]. [*An. Pr.* 25a17-9]

In the letters that I have been using, the proof runs: Assume that every S is P. Then some P is S. For, if not, then no S is P. But that contradicts the original assumption, as it is its contrary.

This proof is valid only if it is assumed that some S exists. This can be shown most clearly in anachronistic predicate logic:

1. $(x)(Sx \supset Px)$	assumption
2. $\sim(\exists x)(Px \ \& \ Sx)$	additional assumption, for indirect proof
3. $(x)(\sim Px \vee \sim Sx)$	2
4. $\sim Px \vee \sim Sx$	3
5. $Sx \supset Px$	1
6. $Px \supset \sim Sx$	4
7. $Sx \supset \sim Sx$	5; 6
8. $\sim Sx \vee \sim Sx$	7
9. $\sim Sx$	8
10. $(x) \sim Sx$	9

The indirect proof does not conclude; indeed the two assumptions are consistent, given that no S exists as lines 1 and 10 show. Of course, according to Aristotle’s theory of predication and the statement, there must be an S for the original assumption to be true. For ‘every S is P’ must be understood as ‘every S exists as a P’. Then the proof is valid, since the indirect proof then can be completed. This proof does not need an additional premise of existential import.<sup>38</sup>

In discussing affirmative and negative statements, I have indicated why Aristotle would find the inference from universal to particular so obvious for quantified statements. Aristotle takes the quantifier (‘every’ or ‘some’) to read as ‘in every case’ or ‘in some case’; ‘in whole’ or ‘in part’. The inference from every case to some case, from whole to part, again looks obvious. The statement simply reads thus. My view then fits the brevity of

<sup>38</sup> At 24b28-30 Aristotle defines ‘of every’ as “when nothing can be taken of which the other will not be said.” Stated thus, for P to be said of every S need not require any S to exist. But Aristotle evidently means “nothing of the subject” as the variant reading suggests. Cf. Alexander, in *An. Pr.* 25,18-21 on ‘of none’.

the text. Aristotle does not discuss existential import much because the statements assert the existence of the subject. Subalternation infers the existence of the part from the existence of its whole.

I have given two reasons why Aristotle could assume existential import for A statements: 1) every affirmative statement of being *per se* simply makes a statement of existence 2) every term allowed in the syllogistic (for science) signifies what is *per se*, and hence signifies one or more items in the categories, all of which exist. Either reason justifies A to I conversion. But, as these two reasons give different results for the E to O inference, let me discuss them further.

To modern eyes, the inference from ‘no S is P’ (E) to ‘some S is not P’ (O) shows even more clearly than the one from A to I the flaw of Aristotle’s logic. For ‘some goat-stag is not real’ seems to assert, or presuppose, the existence of a goat-stag far more than ‘no goat-stag is real’. Many modern interpretations ascribe existential import for all terms to Aristotle in order to save the consistency of his system, at the cost of making Aristotle look rather stupid.<sup>39</sup> In fact, Aristotle does not give an explicit proof for E to O conversion in the *Prior Analytics*. In the previous chapter I have pointed out that Aristotle does not sanction clearly the E to O subalternation in *On Interpretation* either. Indeed, on the first interpretation, he need not accept the inference from E to O at all. Only on the second one should he. For if all terms signify beings *per se* the inference from E to O would follow.

We might save Aristotle’s position with either interpretation given above for the A to I inference: 1) the weaker one where every subject term by itself does not assert existential import but comes to assert it in a statement of being *per se*, and 2) the stronger one where the subject term asserts or somehow grounds the existence claim.<sup>40</sup>

(1) Here we have no existential import for the universal denial. Recall the conclusion reached in Chapter Six: Aristotle understands an O statement not in the usual way (even in Greek). He takes ‘some S is not P’ (‘οὐ πᾶς ἐστὶν ἄνθρωπος δίκαιος’) as ‘not (every S is P)’. Otherwise he generally uses the ‘ὑπάρχει’ construction, ‘P does not belong to some S’. [26b15; 28b32] On this reading the O statement has no existential import either.<sup>41</sup>

<sup>39</sup> Although I find it problematic whether or not Aristotle authorizes the E to O inference, he is commonly thought to do so; e.g., William and Martha Kneale, *The Development of Logic*, pp. 56-60. Certainly later Aristotelians did.

<sup>40</sup> In Chapter Nine we shall see that Alexander and the “Stoics” argue over this.

<sup>41</sup> Robin Smith, *Prior Analytics*, pp. xviii; xxvi. For the E statement Aristotle uses a different form in *On Interpretation*: e.g., 20a21, ‘οὐδεὶς ἐστὶν ἄνθρωπος δίκαιος’, again an unusual grammatical construction.

Michael Wedin, “Negation and Quantification in Aristotle,” p. 134, says, “Aristotle never writes O statements as ‘some S is not P’ but as ‘not every S is P’.” (Ammonius, *In De Int.*

If we take the A statement to make an explicit existence claim sc., as ‘ $(\exists x)Sx \ \& \ (x)(Sx \supset Px)$ ’, then the O statement ‘ $\sim[(\exists x)Sx \ \& \ (x)(Sx \supset Px)]$ ’ will follow from the E statement ‘ $(x)(Sx \supset \sim Px)$ ’ or the denial of the I statement ‘ $\sim(\exists x)(Sx \ \& \ Px)$ ’.

Aristotle would be requiring existential import only for affirmative statements (N.B.: Not: “sentences!”): their subjects must exist for them to be true. As their subjects exist as being P, then P exists too; otherwise the ‘is’ would be *per accidens*. In light of conversion too, the predicate (‘P’) will have existential import. But, in contrast, the negative universal (E) or negative particular (O) statements need not have their subjects exist.<sup>42</sup> This result follows from the interpretation of negation given in Chapter Six: an E statement has the form ‘not (some S is P)’; an O statement ‘not (every S is P)’. The non-existence of S suffices to make either statement true. Hence Aristotle needs only affirmative statements to have existential import. This conclusion agrees with the majority interpretation of Aristotle’s syllogistic and theory of inference.<sup>43</sup> Indeed, on occasion, say with Baroco (II AOO), Aristotle even remarks that a proof given for ‘some S is not P’ will work for ‘not every S is P’. [*An. Pr.* 27a36-b3; cf. 62a9-10] Such remarks suggest

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9528ff., et al. think otherwise, as we shall see in the next chapter.) As a result, Aristotle ends up with disjunctive truth conditions.” Cf. p. 141.

<sup>42</sup> Arthur Prior, *Formal Logic*, Second Edition, p. 169, offers this interpretation of Aristotle, and notes its being offered also by Popper, Keynes, and Johnson. However, he points out that it conflicts with *Prior Analytics* II.15, where Aristotle says that ‘no S is S’ is always false. I am not convinced. That text is not too clear and rather dialectical, although I do agree that ‘what is not [existent as] good is good’ [64a19] seems always false to me. As for existential import for the negative premises there, these may be taken metathetically, or have their terms get it anyway, as they are being assumed together with their positive opposites. Indeed at 63b22-30 Aristotle says that ‘to some’ and ‘to none’ are “opposites”. He distinguishes ‘opposites’ from ‘contraries’ but implies that some “opposites” are not contradictories: e.g., I and O statements are “opposites”. So I find this passage inconclusive. At 40a30-1 and elsewhere in the modal syllogistic Aristotle seems to infer an O statement from the denial of an E statement, usually in indirect proof. See below *re* the significance of the modal or counterfactual context. (It is not necessary to go so far as David Sanford, “Contraries and Subcontraries,” who claims that some necessarily true statements cannot have contraries.)

Michael Wedin, “Negation and Quantification in Aristotle,” p. 132, holds that Aristotle has no existential import for negative statements, although *On Interpretation* does commit him to it. Cf. Alonzo Church, “The History of the Question of the Existential Import of Categorical Proposition,” p. 419; E. A. Moody, *Truth and Consequence in Medieval Logic*, p. 52. I shall argue below that Aristotle is consistent because he takes E statements in the syllogistic “privately”.

<sup>43</sup> There remain dissenters: John Corcoran, “Aristotle’s Natural Deduction System,” pp. 102-4; Timothy Smiley, “Syllogism and Quantification,” p. 66; Michael Clark, *The Place of Syllogistic in Logical Theory*, p. 26; Ulrich Nortmann, *Modale Syllogismen*, p. 114. Gisela Striker, “Assertoric vs. Modal Syllogistic,” p. 39, claims that Aristotle accepts predication *per accidens* in the assertoric but not in the modal syllogistic.

that he does not think the two equivalent, perhaps because only the first has existential import.

(2) According to the second interpretation, every term admitted into scientific discourse must signify an item in the categories, and so has existential import.<sup>44</sup> After all, Aristotle's science deals with what exists. As it stands, this view does not work. For science explains the past, like the wrath of Achilles, and predicts the future, as with the eclipses. [*An. Po.* II.13; 16] At the very least, then, the existence *per se* here must be amplified, via the inflection of tenses, to cover existence at some point of time, not necessarily at present.<sup>45</sup> (Note that 'Homer was a poet; therefore Homer existed' is valid!) Beyond this we can go on to require that everything talked about must signify something that exists in the world at some time: not necessarily the particular combinations of objects and attributes, but at least the atomic components of the statement. (Aristotle seems inclined to stick to the actual items in this world; others might allow items in any possible world.)

With this modification, terms for Aristotle would function much as they do in standard modern logic: a term is introduced as referring to some object in the domain, with the exception of not recognizing the null set (or: zero) as an object. This interpretation does suit Aristotle's scientific views. As he develops his logic mostly for the sake of science, this interpretation has its attractions. It does have the weakness of limiting the domain of discourse to which the logic will apply only to statements of being *per se*.<sup>46</sup> This interpretation amounts to presupposing existence for assertions in the sense of Strawson or perhaps deriving the existential import from the content of the subject term as on the copulative theory of Aquinas *et al.*

Yet Aristotle himself wants to give logical analyses of talk of 'not-beings'. He himself gives syllogisms using 'goat-stag'. [*An. Pr.* 49a24] Philosophers and scientists have to engage and refute sophistical and eristic argument. Surely he should want to have his logical theory apply! So this interpretation has the disadvantage of not enabling the syllogistic to apply to sophistical and counterfactual arguments, unless we admit that the things signified therein "exist" in the same way as real dogs and snakes. To admit

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<sup>44</sup> Alexander, in *An. Pr.* 80,11-9; 84,2-9, gives existential import for all terms it seems. For he takes A and O statements to be contradictories; cf. 259,20-2. (But it is hard to find a text where Aristotle states this. Perhaps 34a36-b2, but that has a modal context.)

<sup>45</sup> Cf. Chapter Four, n. 17, on *ut nunc* and *simpliciter* predications.

<sup>46</sup> Karel Lambert, "Existential Import Revisited," pp. 288-9, notes the usual difficulty of having an implicit existential import assumption. If the terms be limited to what exists, then the logic is unduly limited. He notes, though, that the same thing happens in classical (Frege-Russell) logic with identity statements.

this, Aristotle would then have to abandon his robust sense of reality, of being *per se*, which he has defended so vehemently against the sophists.

My position, stated in the previous chapter, solves the difficulties. Stick to the first interpretation, where existence comes from the affirmation of *being per se*. Sentences asserting being *per accidens* or having non-existent subjects are assumed to have being *per se* for the sake of the logical analysis. The validity of such syllogisms stands independently from the truth of its premises. In this way Aristotle can argue with the sophists. Such syllogisms, even if valid, are excluded from scientific demonstration since their premises, taken as statements of being *per se*, are not true. We admit to our domain of discourse only terms signifying items in the categories in order to assure that the premises are true.<sup>47</sup>

There being two ways to read the universal negative (E) statement in Aristotle's syllogistic complicates the comparison of these two interpretations in regard to E to O subalternation. a) The first way is the one suggested by *On Interpretation* that I have been discussing. The E statement is the negation of the I statement, and the O statement the negation of the A statement. b) However Aristotle appears to have another way of considering E statements, notably in his syllogistic. There Aristotle generally describes the E statement not as "negative" but as "privative" as I shall discuss next. This seems to suggest taking the negative particle with the predicate and then predicating the whole unit of the subject, as in fact Aristotle generally does. So on this "privative" reading, Aristotle treats a negative universal sentence in his syllogistic not as a simple denial but as a metathetic affirmation. 'P belongs to no S' would be read as 'every S is not-P'. Likewise the O statement would be 'some S is not-P'. Then the subject, appearing in an affirmation, would have existential import asserted explicitly, and the E to O inference would hold. Aristotle hints that he prefers this reading in his syllogistic when he calls 'A belongs to no B' "a privative universal". [*An. Pr.* 25a14]

Consequently, we have the complication that either interpretation can justify the inference of subalternation from E to O. The second one (2) does on either reading of E statements in the syllogistic. But the first one (1) does so only on the privative reading (b). I still find (1a) to be the safer reading. But Aristotle might be using (1b) in the syllogistic although even there he does not seem to use the E to O inference.

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<sup>47</sup> We shall see in the next chapter that Aristotle's successors debated between these two interpretations, and that the Stoics and perhaps Theophrastus went for the stronger, second interpretation.

*Conversion*

Aristotle discusses the conversion of statements only of *tertium adiacens*.<sup>48</sup> Further, he does so only in developing the syllogistic, and there concentrates on particular and universal statements having explicit quantifiers. He treats indefinite statements as meaning the same as the particular ones. Aristotle uses ‘conversion’ for three different sorts of cases.<sup>49</sup> Here I am concerned only with conversion where the subject and predicate complement end up switched.

Aristotle might seem to discuss conversion also in *On Interpretation* 10 when he calls the predicate complement (‘white’ in ‘a man is white’) “the verb”, and allows subject and predicate to be “transposed” (μετατιθεμένα) [20b1]. E.g., ‘a man is white’ and ‘white is a man’. Aristotle seems to allow a “verb” (‘white’) to stand as subject in the conversion of statements. He also speaks of “names and verbs that are indefinite...such as ‘not-man’ and ‘not-just’.” [20a32]. Here he seems to call ‘not-just’ an indefinite verb, and to allow a metathetic “verb” or predicate, like ‘not-just’ in ‘man is not-just’ to be transposed also, into ‘not-just is man’. Indeed, he seems to do this again at *Topics* 113b20-1.

Nevertheless, I have argued in Chapter Four this passage does not discuss conversion at all, but rather the transposition of name and modifier in a complex subject expression. Still, I do admit that his remarks there might be, and have been, construed to deal with conversion. Still, even if so construed, they will not conflict with the view of conversion that I am going to present now.<sup>50</sup>

In passages where Aristotle discusses conversion he seems to be endorsing the view of the proposition (πρότασις) that he uses in his syllogistic. There he calls the subject and predicate expressions “terms” and says that a proposition consists in two terms, with ‘is’ or ‘is not’ attached to it. [*An. Pr.* 24b16-8]. On this view, in the tripartite proposition of *tertium adiacens*, like ‘man is white’, both the subject expression and the predicate complement will be terms equally, with the ability to be interchanged, so as to be able to occupy the subject or the predicate place indifferently.<sup>51</sup>

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<sup>48</sup> Also cf. *Prior Analytics* 49a31-6 for a curious example relating *secundum adiacens* to *tertium adiacens*.

<sup>49</sup> Alexander, in *An. Pr.* 29,7ff.

<sup>50</sup> If, as discussed in Chapter Four, we construe a simple predication as a complex (‘there is an S-P’), conversion will be transposition. But the ‘belongs to’ construction does not support this construal much.

<sup>51</sup> Aristotle might have had this view in mind at 20b1 too when he said that ‘white’ is the verb, i.e., occupies the verbal slot in the proposition.



Even more striking is the comparison of this view of a proposition composed of two terms, with the doctrine of unnatural predication. Any accidental predication having a substantial subject when converted seems to result in an unnatural predication. E.g., ‘every man is just’ becomes ‘some just (thing) is a man’. As long as such paronymous expressions are taken concretely, their assertions can still make statements of being *per se*. Still, even so, they do not have their proper or primary subject.

How consistent is Aristotle’s doctrine of the terms of a statement and their conversion with his bipartite analysis of names and verbs? How can his names and verbs be indifferently subject and predicate? These “terms” do not appear equivalent to what Aristotle says about names and verbs. For having a term as predicate does not constitute a verb as it does not signify time. But Aristotle says that a verb “additionally signifies” time.

As I have said in Chapter Four, it is easy to speculate that Aristotle inherited a *name-verb theory* of the statement, and then, as he came to use statements as propositions in syllogisms, abandoned this theory in favor of the *term theory*. This transition, some charge, would bring about inconsistency if all Aristotle’s claims be taken to belong to a single theory. Nevertheless, let us proceed with optimism.

I have already used Aristotle’s views on A to I conversion in discussing subalternation. There Aristotle shows no hesitation in switching the subject term and the predicate complement. From the example he gives, he seems that terms may be either names of substances or paronymous expressions, derivative from those naming items in non-substantial categories. Indeed, Aristotle states explicitly that the terms in syllogistic premises must not be those naming the states, the abstract terms, but those naming the things naming the things having those states, the concrete terms.<sup>52</sup> The paronymous expressions must be understood concretely, like ‘the just thing’, in order not to conflict with Aristotle’s doctrine of unnatural predication. As we have seen in Chapter Six, Aristotle holds that ‘white’ and ‘not-just’ cannot stand by themselves, as they are accidents, but presuppose a subject. [20b15-9] Apparently terms like ‘white’ and ‘not-just’ are to be taken concretely, with a substantial subject presupposed: taken thus, ‘white’ means ‘the white’, ‘that which is white’; ‘not-just’ ‘what is other than just’ i.e., ‘that which is other than that which is just’.

Aristotle’s views on paronymous expressions support this presupposition. Terms like ‘white’ and ‘just’ do not name directly a being *per se*, but

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<sup>52</sup> Or: sometimes a complex phrase must be used, 48a38-40. Alexander, in *An. Pr.* 353,19-21, at first wants to use a verb (‘ails’) instead of the state (‘illness’); this works for the bipartite analysis. He too then, 354,12, resolves the verb into the concrete name, ‘one who is ill’.

instead signify that an item in a non-substantial category has become an attribute of a particular substance. So, even though Aristotle would allow statements of being *per se* like ‘whiteness is’, he would not allow those like ‘white is’, but only those like ‘the white thing is’. Thus, ‘not-just is a man’ should be read as ‘a thing that is not-just is a man’, and ‘white is man’, as ‘the thing that is white is a man’. Similar readings apply to all cases of conversion where the subject becomes a paronymous expression.

Aristotle does not literally say ‘the just thing’, but only ‘the just’ or ‘just’ (τὸ δίκαιον). He has some extended discussions about how to understand such expressions:

It is not true to say of what is said accidentally (κατὰ συμβεβηκός), like the musical or white, that it and its essence are the same, on account of its signifying in two ways: for both that to which white happens and the accident are white. [*Metaph.* 1031b22-5]

‘The white’ (τὸ λευκόν), he says, may signify 1) the thing or substance that has the attribute of whiteness along with its other attributes, essential and accidental or 2) whiteness. The first is a substantial signification, of a concrete term used concretely; the second an accidental one, of a concrete term used abstractly.<sup>53</sup> In this passage, Aristotle is taking a paronymous expression like ‘the white’ to name either what has the attribute of whiteness or the attribute of whiteness itself—but not a being *per accidens*. For in *Metaphysics* VII Aristotle has already dismissed being *per accidens*. So both significations concern beings *per se*.

Aristotle prefers the former, concrete reading, in order to avoid appearances of being *per accidens* and to avoid, at least in letter, unnatural predication. But then ‘Socrates is just’ means ‘Socrates is existent as a just thing’, where that just thing is Socrates. Here ‘the just thing’ is taken to name the substance Socrates, sc., the thing that is just. Recall that many expressions may express the same name, verb, or statement for Aristotle. The just thing, now naming a substance, then might be said to be *per se*, in its own right, where ‘being Socrates’ specifies its sort of being further. Now this reading does violate the spirit of the aspect theory somewhat. Strictly, Aristotle would like a non-paronymous name of a (individual) substance in subject position. [*Metaph.* VII.3] But, with this all said, Aristotle seems much more inclined than usual to allow in his syllogistic for a

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<sup>53</sup> There are more options. See the section on unnatural predication in the previous Chapter.

concrete paronymous term, derived from the name of an accident, to be in subject position, with a substance term in predicate position.<sup>54</sup>

I have suggested that Aristotle is drawn to the tripartite analysis for the sake of syllogistic. As a statement of *tertium adiacens* asserts the relation of two categorial objects, ideally a substance and an attribute, Aristotle would naturally compare their two names. This comparison yields the relations of being said of every, of some, and of no cases: Aristotle explains the relation of being said of every as equivalent to the relation of part to whole. [*An. Pr.* 24b26-30] In such a comparison between parts and wholes, the existence claim still is present, but it hardly matters which is the subject and which is predicated. However, the predicate is still ‘is P’. For the verb is ‘is P’ and not the mere term ‘P’. [Ammonius, *in An. Pr.* 23,31] A term placed in predicate position constitutes part of the verb, which consignifies time. Just as Aristotle renders ‘walks’ as ‘is walking’, so too we may render ‘is walking’ etc. (‘is P’) as the verb ‘walks’.

With the concrete reading of the paronymous expressions, how Aristotle converts statements may be explained according to the aspect theory. A statement, ‘S is P’, asserts that S is existent as a P. The predicate ‘P’ is a concrete name, whether one directly signifying a substance, like ‘dog’, or a paronymous name, like ‘just’, taken concretely, so as to signify indirectly a substance. ‘S is P’ then asserts that (the thing that is) S exists as (the thing that is) P’. This reading suggests readily the conversion ‘(the thing that is) P exists as (the thing that is) S’.

That Aristotle takes terms in syllogistic concretely is also supported by the dominant manuscript readings for 25a15-22, where Aristotle says, e.g., “one of the B’s” instead of ‘B’. (Ross, however, tended to eliminate the concrete reading for the latter, abstract one when he could.<sup>55</sup>) In any case, we should read ‘every S is P’ as ‘everything that is S is a thing that is P’ when considering conversions and indeed then syllogisms. [Philoponus, *in An. Pr.* 49,23-6]

Also, considering conversion in light of the aspect theory may explain in part why Aristotle tends not to use singular terms in syllogistic. For, as we have seen in Chapter Six, Aristotle calls the predication of singular terms “unnatural”.<sup>56</sup> Although Aristotle does occasionally use singular terms in his syllogistic, he does so mostly in polemical or dialectical con-

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<sup>54</sup> Robert Turnbull, “Zeno’s Stricture and Predication,” p. 37, generally agrees with my account of conversion.

<sup>55</sup> Robin Smith, “What is Aristotelian Echthesis?,” pp. 119-20. I agree with Smith, but shall use Ross’ text below for consistency. Still the terms are to be read concretely.

<sup>56</sup> The predication of terms like ‘some log’ or ‘this log’ looks more like the predication of a sub-species than the predication of a proper name does.

texts. To say, when converting 'Socrates is white', 'the white thing exists as Socrates' has the sophistical flavor of a being *per accidens*.<sup>57</sup>

Aristotle discusses how only some of the possible statement forms convert. He rejects a sentence of the form 'every S is every P' as useless and impossible. [43b20-1] 'Every S is every P' would be read as 'every S exists as every P'. But if there is more than one P, then each of them would be the same as all the P's. So too for 'S is every P'. Still, the form, though perhaps useless, is not impossible, unless we assume, as Aristotle might, that every species must have more than one instance. [*Metaph.* IX.4] Aristotle might allow 'every S is some (a) P', as the commentators say,<sup>58</sup> perhaps because 'some' (τις) functions rather like a name taken indefinitely. Again, Aristotle does not deal explicitly with the conversion of indefinite propositions, but takes them to be equivalent to the particular ones in his syllogistic, although not always so elsewhere.

The particular cases of conversion that Aristotle does discuss follow the general explanation given above, except that the name of the subject, when modified by a quantifier, may have to have its modifier changed when it is used as a predicate of that subject. (i) The A statement converts into an I statement. Aristotle treats the relation of 'some' to 'every' as one of part to whole. Indeed, his terms for 'particular' and 'universal' reflect this: 'in part' ('ἐν μέρει') versus 'of the whole' ('καθόλου'). E.g., in 'every dog is an animal', 'dog' names the whole class of the things that are dogs, and part of the things that are animals. So 'every dog' and 'some animal', in this context, name the same things. Just as the whole class of dogs exists as a part of the things that are animals, so too part of the class of animals exists as the whole of the class of things that are dogs. So 'every dog is (exists as) an animal' and 'some animal is (exists as) a dog' are equivalent. So take 'every S is P.' Then 'every S exists as a P'. Now 'a P' or 'some P', but not 'every P', names the same objects as 'every S' names. So some P is S.

(ii) Likewise, I statements convert into I statements. E.g., if some dogs exist as red, then some dog exists as part of the things that are red, given only the information contained in the statement, and so some red thing exists as a dog.

So the A to I and I to I conversions look obvious. But how to prove them? Aristotle himself uses the indirect proof stated above. In either case, he takes the negation of the conclusion, 'not (some P is S)'. This is equivalent to 'no P is S'. By E to E conversion then 'no S is P'. But this is contrary to 'every [or: some] S is P'. [25a17-22] Perhaps for Aristotle these

<sup>57</sup> Michael Frede, "Stoic vs. Aristotelian Syllogistic," p. 8.

<sup>58</sup> Ammonius, in *De Int.* 102.19ff. Alexander, in *An. Pr.* 247,13-5, does not make much of this.

conversion proofs depend only upon indirect proof, the square of opposition, and E to E conversion. Accordingly he proves E to E conversion first.

(iii) This case, of E to E conversion, presents more difficulty. First, it is not clear what Aristotle thinks the logical form of the E statement is. He calls a statement of the form, 'P belongs to, or is predicated of, no B', "a privative universal". [*An. Pr.* 25a14; 25b40]<sup>59</sup> Such a statement might be taken as an affirmation where 'P' is predicated of 'no S'. The 'belongs to' construction facilitates this reading. [48b2-4; 48b27-8] Once again Aristotle is taking the quantified subject expression, 'no S', as a unit. [*Int.* 7b11-2] 'No S is P' would then assert that nothing that is an S exists as a P. Such an assertion might be taken also as the simple denial. Then it would state that it is not the case that some S exists as a P. That would be consistent with, and would follow from, the claim that there does not exist a single S. However, a "privative" reading should deprive some actually existent subject of some attribute. We can make a more positive, privative reading, that no-thing that exists as an S exists as a P. This amounts to saying that every S is a not-P. The privative reading of this negative sentence gives a metathetic affirmation.

As mentioned above, I find it likely that Aristotle takes the negative universal premises in his syllogistic in this way (b). For it is suggested by his taking paronymous terms concretely. Further, Aristotle tends to identify privative expressions, like 'unjust', with metathetic ones, like 'not-just'. [51b26-7; 52a15-7]<sup>60</sup> Still, I admit, the other interpretation (a), taking the negative universal as the simple denial, is possible. In either case an E and an I statement cannot both be true at the same time. [*Int.* 17b18-9]

Another reason to prefer taking the universal negative premise as a metathetic affirmation concerns how Aristotle argues for its conversion. If we take the E statement to be the simple denial, then there is a simple conversion proof: given that 'no S is P' means, or is equivalent to, 'it is not the case that some S is P', and given that the I statement, 'some S is P', converts with itself, 'some P is S', we may substitute one I statement for another. Then 'it is not the case that some P is S' follows; i.e., 'no P is S'.

Yet Aristotle does not use this proof. It would depend on his proving the I conversion before proving the E conversion. This can be done, as I have done above. Commentators have wondered why Aristotle does not do

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<sup>59</sup> At *Prior Analytics* 51a37-9 Aristotle identifies 'στερητικόν' with 'ἀποφατικόν'. Perhaps that is why he proceeds in the next chapter to distinguish metathetic from simple denial.

<sup>60</sup> Cf. 26a19; 52a34-b3. Alexander, in *An. Pr.* 59,30-1, takes the "privative" there to amount to the simple negative.

it.<sup>61</sup> Perhaps Aristotle has a different conception of an E statement: the metathetic.

Using the form, 'every S is not-P' together with the aspect theory makes the details of Aristotle's proof of E to E conversion clear: If every S exists as not-P, then 'a not-P', or 'some not-P' names S. Then 'some not-P is S'. But this does not get us 'no P is S', i.e., 'every P is not-S'. Accordingly, Aristotle has to find a less direct way to prove E to E conversion: first, because he does not want indefinite names as terms in his syllogistic, he has to find a way of making not 'not-P' but 'P' the converted subject; second, because he needs to prove that an E proposition converts into a universal and not into a particular. He says:

Thus if A belongs to no B, neither will B belongs to no A: for if to some, say to C, it will not be true that A belongs to no B. For C is one of the B's. [*An. Pr.* 25a14-7]

Aristotle is using reduction to the impossible.<sup>62</sup> It is given that no B is A. Now suppose that 'no A is B' does not follow. Then it is not the case that no A is B. (At this point we can use either reading of the E statement:)

(a: the reading of the simple denial) This amounts to 'not (either some A does not exist or B is not predicated of some A)'. Let that A be C. Hence, by "De Morgan's rule", C exists and it is not the case that B is not predicated of C. I.e., some A is B.

A more elegant version for (a): This amounts to 'it is not the case that no A is B, i.e., to 'not [not (some A is B)]'. Then some A, say C, is B. But C is a B that is also an A. Hence some B is A. This is inconsistent with the original premise that no B is A.

Either of these versions (of a) requires that Aristotle be fairly sophisticated early on. The former requires too that he know "De Morgan's" rule, which, as far as we know, was known only with the Stoics. Still, either of them follows the text better than the proof based on I conversion given above. Again neither requires a special ekthetic supposition of existence.

(b: the reading of the metathetic affirmation) This amounts to 'not (every A is not-B)'. Then some A is not not-B. Since the metathetic reading guarantees existential import, some of these A's exist. Let one such A be C. Then C is not not-B, i.e., C is a B. Since C is a B and no B is A, C is not an A. But C was an A.

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<sup>61</sup> E.g., Robin Smith, *Prior Analytics*, p. 112. Theophrastus and Eudemus evidently based the proof of E to E conversion on the primitive assumption that if A differs from B then B differs from A. Alexander, in *An. Pr.* 31,6-9; 34,13-4; Philoponus, in *An. Pr.* 48,12-8.

<sup>62</sup> Philoponus, in *An. Pr.* 47,14-7, says that Aristotle grounds reduction to the impossible on the principle of non-contradiction.

This proof is indirect, but does not use *ekthesis* in the sense of making a special, extra assumption of existence. Rather the original premise gives the existential import. Some have charged Aristotle with circularity in such proofs. E.g., ‘since C is a B and no B is A, C is not an A’ looks like a syllogism in the first figure [Celarent]. However, it is claimed, Aristotle means such to be based on the *dicta de omni et de nullo*. [Alexander, in *An. Pr.* 32,2-21]

(iv) In the case of the particular negative, ‘some S is not P’, Aristotle rightly says that no conversion follows. E.g., ‘some animal is not a man’ is true, and ‘some man is not an animal’ is false. [*An. Pr.* 25a22-6] However, if we take this case “privatively” like the universal negative, so as to read ‘some S is not-P’, we do get a conversion, ‘some not-P is S’. But ‘not-P’ is not a name, but an indefinite name. Aristotle is interested only in names, of items in the categories, in his syllogistic. Hence he ignores indefinite names.<sup>63</sup> For they apply to what does or does not exist.

It might be objected that these accounts of conversion attenuate the aspect theory, as terms can be indifferently subject and predicate. For to say that the just thing exists as Socrates means that Socrates specifies further the sort of being that the just thing has seems to have lost some of the original import of the aspect theory.

Not only do I agree with this point, but, I submit, so does Aristotle. For the doctrine of unnatural predication and Aristotle’s attempt in the *Posterior Analytics* to arrange predicates in a hierarchy having both a lowest and a highest member try to regiment the language allowed by the syllogistic with its tripartite premises. In his scientific, demonstrative enterprise Aristotle wants to speak more precisely, and so limits the sorts of things that can be said, strictly. The syllogistic may use paronymous terms taken concretely. But category theory and demonstration tend to eliminate them, or use them only as mere *façons de parler*. Technical is to ordinary language as demonstration is to syllogistic: “it is most difficult to convert a suitable name (derived) from an accident.” [*Top.* 109a10-1] As Aristotle develops his theory, he moves it further away from ordinary language. So too when he ends up restricting being *per se* to substances.

### *The Syllogism*

Even Aristotle’s main inferential vehicle, the syllogism, can be seen as an extension of an aspect theory of predication. Aristotle holds a syllogism to

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<sup>63</sup> So Aristotle is not interested in obversion: ‘S is P; therefore not-P is not-S’. Cf. Alonzo Church, “The History of the Question of Existential Import for Categorical Propositions,” pp. 418-9.

give an explanation why the predication made in the conclusion ('S is P') is true. He does so by looking for a middle, mediating term ('M') that, through having stronger predication links with the major and minor terms ('S' and 'P') than they do with each other, can justify that predication. Aristotle's favorite syllogistic form is Barbara, the first form of the first figure ('If every S is M, and every M is P, then every S is P'). Aristotle concentrates on the relations between the subject and predicate terms. As we have seen with the *dictum de omni*, he construes predication as a part-whole relation. It is easy to construe this on an aspect theory: the Barbara syllogism asserts that if every S exists as an M and every M exists as a P, then every S exists as a P. Indeed, various modern interpretations of Aristotle's syllogistic have rejected attributing to it a copulative theory of predication.<sup>64</sup>

Sometimes Aristotle expresses an entire (Barbara) syllogism in a single sentence, in a form like 'S *qua* M is P' or 'S is P through M', or 'S is P, in that (ὅτι) or because (διότι) it is M'. [*An. Pr.* 48a33-5] Here, ideally, the further qualification of the predicate 'P' by 'M' does not specify the type of existence of S further, but instead explains, causally, the existence of S. At the least, the middle term will guarantee the presence of the predicate 'P'. Aristotle prefers that the middle term gives the cause, in a demonstration of the reason (διότι). But, pragmatic as always, he will settle for a reliable symptom for the presence of 'P' in a demonstration of the fact (ὅτι).

Again Aristotle's emphasis on a syllogism's specifying the existence of the subject further may explain why he does not recognize the hypothetical and the disjunctive as forms of syllogisms, strictly speaking. For in these cases the existence of the subject (S) is not assured.<sup>65</sup>

The method of *ekthesis*, or exposition, calls for some comment. Aristotle uses "exposition" (*ekthesis*) as an alternative mode of proof procedure in syllogistic.<sup>66</sup> Here he moves from the whole to a part or instance of the subject of a premise. It is claimed that Aristotle uses *ekthesis* as alternative proofs for syllogisms like Bocardo and Darapti, and as the only proofs for necessary (NNN) Bocardo and Baroco and for E conversion.<sup>67</sup> In *ekthesis*,

<sup>64</sup> Jan Łukasiewicz, *Aristotle's Syllogistic*, pp. 14-6; John Corcoran, "Aristotle's Natural Deduction System, p. 100.

<sup>65</sup> Robin Smith, "Dialectic and the Syllogism," pp. 114-6.

<sup>66</sup> '*Ekthesis*' has some connection to present sense perception. Cf. Alexander, in *An. Pr.* 32,32-33,3; 99,31-100,27. So too Philoponus, in *An. Pr.* 49,22-6. However, perhaps Alexander, 122,17-34, is wrong that all types of exposition, e.g., in *Prior Analytics* I.8, are tied to sense perception. So W. D. Ross, *Aristotle's Prior and Posterior Analytics*, pp. 317-8, claims.

<sup>67</sup> Mario Mignucci, "Expository Proofs in Aristotle's Syllogistic," pp. 9-10.



an “arbitrary instance” (to use Kit Fine’s phrase) of the premise is *supposed*, and the proof proceeds. E.g., if it is *assumed* that every S is P, then suppose that some S, say T, is P; likewise for ‘no S is P’ suppose that some S, say U, is not P.

*Ekthesis* may be understood in various ways. In relation to existential import, it can be taken weakly, merely to set out the existential assertions already made in the original premises, or strongly, to make an assertion of existence beyond what those premises assert. Generally, I think that Aristotle wants the weaker version.<sup>68</sup>

The main way in which *ekthesis* might appear to conflict with my interpretation concerns negative propositions. For to use *ekthesis* there appears to presume existential import. Even if Aristotle did use *ekthesis* on negative premises, the interpretations given above work. (A) If taken “privatively”, negative propositions present no problems. (B) If taken as simple denials, without existential import, note, first, that in such cases Aristotle may be using *ekthesis* for a negative premise in reduction to the impossible, as in proving the conversion of the negative universal statement. This is a special context having an impossible assumption. In his own terminology Aristotle carefully distinguishes such “hypothesis” from real “positings” of existence.<sup>69</sup> Again, when speaking about what is possible, we can be freer in supposing that something might exist than in positing that something does exist. In fact, Aristotle uses *ekthesis* most frequently in giving reduction proofs in his modal syllogistic. Second, note that when he does use *ekthesis* in a non-modal proof, as with Bocardo [28b20-1], he offers the expository proof as an alternative. He might be implying that this proof works only in contexts where we can assume existential import for all terms, as is the default value in Aristotle’s scientific protocol language.

However, more to the point, there are no clear cases of Aristotle’s using *ekthesis* on a negative (E or O) statement, although Alexander certainly takes him thus. [*in An. Pr.* 45,25-46,2; 104,8-10] But the evidence is wanting. At best, Aristotle has introduced exposition only as an alternative, perhaps to be used only in special contexts.<sup>70</sup> His reluctance to do more

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<sup>68</sup> So too Alexander, *in An. Pr.* 33,12-3; Mario Mignucci, “Expository Proofs in Aristotle’s Syllogistic, pp. 21-8. The latter’s worry, p. 22, about exposition for universal premises disappears on my analysis of universal statements. Robin Smith, *Prior Analytics*, pp. xxiii-iv, says that the proof from A to I is not a case of an ekthetic syllogism but of an *ekthesis* in a reduction proof. I agree only so long as *ekthesis* is taken in the weak sense. See Alexander, *in An. Pr.* 32,28-34; 24,7-9. Taking *ekthesis* in this sense would give Aristotle the same sort of *ekthesis* mentioned at 49b33-50a4.

<sup>69</sup> Robin Smith, *Prior Analytics*, p. xxx.

<sup>70</sup> Michael Wedin, “Negation and Quantification in Aristotle,” p. 147, likewise sees *ekthesis* as an alternative proof procedure where existential import is needed, perhaps for Da-

with exposition than this perhaps supports the claim that Aristotle in general wants existential import only for affirmations.<sup>71</sup>

Perhaps the most interesting prospects here for applying the aspect theory usefully lie with the modal syllogistic. It offers hope of a new approach for making Aristotle's results consistent. I shall give only a preliminary sketch. There now become more options for positioning the modal operator. E.g., let '\*' indicate a possible positioning of a modal operator, before what it has scope over. Then we have (*inter alia*): '(S \*exists as \*being \*P)'. The fourth choice is out since Aristotle does not give terms like 'necessary P'. The first choice looks unlikely because Aristotle generally puts the modality as connecting the two terms: P "belongs by necessity" to S. The second choice is the customary one, but has not worked out. The third choice is the new option given by the aspect theory. Also this new option seems one that makes statements about objects *in re* true. E.g., take 'some dog is by necessity an animal'. It is contingent that any dog exist now. So not 'some dog necessarily exists as a animal' but 'some dog exists, as necessarily being an animal'. Once some dog exists, it must be an animal. The point is that the modality usually enters in only for the claim of the predicate's being predicated of the subject, and not for that of the existence of the subject.

For example, Aristotle says that "it is possible for this to belong to that" can be taken in two ways: to that to which this belongs, or that to which it is possible for this to belong." [*An. Pr.* 32b25-7]<sup>72</sup> That is, A can be said of that of which B is said, or A can be said of that of which B can be said. [32b27-9] First, this distinction shows that Aristotle takes the terms in a tripartite statement concretely. E.g., 'every S is P' means 'everything that is an S is a thing that is a P'. This supports my account of conversion. Next, if we position the modality in 'it is possible that every S is P' as suggested above, we get the two versions: 'everything that is [exists as] S exists as possibly being P' and 'everything that possibly is [exists as] S exists as possibly being P'. This reading may resolve some of the difficulties in the proofs of the mixed modal syllogisms.

I do not intend to offer a full account of the syllogistic here. But to illustrate the possible advantage of the aspect theory, let me take the infamous case of the mixed Barbara: [I NAANA] If every B is necessarily A

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rapti and especially Bocardo. He argues convincingly, p. 141, against W. and M. Kneale, *The Development of Logic*, p. 74, that Darapti and Felapton do not need existential import.

<sup>71</sup> Cf. Michael Wedin, "Negation and Quantification in Aristotle," p. 137.

<sup>72</sup> This text, like 49b14-6, shows that Aristotle is ready to recognize more than a single predication relation in a simple statement: 'S is P' is to be read as 'what is S exists as being P'.

and every C is B, then every C is necessarily A. [30a15-23] The major premise is to be construed as: every B exists, as necessarily being A. The minor premise asserts that every C exists, as being a B. Then “every C” too will exist, as necessarily being A. This reasoning closely follows Aristotle’s own proof: “C is one of the B’s.” [30a22]

### *The Fallacy of Accident*

As I have remarked in discussing the antepredicamental rule, Aristotle does not at all use the examples that have come later to typify “the fallacy of accident”. His examples are such as: ‘if Coriscus is different from Socrates, and Socrates is a man, then Coriscus is different from a man’ [*Soph. El.* 166b33-5]; ‘since this dog is a father, and is yours, it is your father’ [179b14-5]; and the famous, ‘I know Coriscus; Coriscus is the one who is approaching; therefore I know the one who is approaching’. [179b2-4] In the later, Aristotelian tradition, the typical examples are like ‘Socrates is white; white is a color; therefore Socrates is a color’ and the still later ‘Socrates is man; man is a species; therefore Socrates is a species’.<sup>73</sup> Aristotle’s examples appear to have a much different character than the later, standard ones. Of course, the later, typical examples do satisfy the general description Aristotle gives of the fallacy: that it occurs when an accident and its subject are assumed to have the same predicates, i.e., when the subject is thought to have the same predicates as its (accidental) predicates have. [166b28-32] The difference lies in an expanded sense of ‘accident’: terms of second intentions like ‘species’, as well as paronymous terms (‘white’) now count as names of accidents. But Aristotle never considers these, as he restricts his attention, and the language, to categorical expressions.

Aristotle says that the fallacy of accident comes about because it is “indefinite” when what belongs to an accident of an object also belongs to that object. [179a27-9] Only those things that cannot be differentiated and are one in essence have the same attributes necessarily. [179a37-9] What is true of an accident need not be true of the subject. [179a36-7; 168a37-b5] E.g., ‘Coriscus is the one approaching; the one approaching is not known by me; therefore Coriscus is not known by me’.<sup>74</sup> Aristotle claims that all instances of the fallacy of accident have the common structure of predicating an attribute, generally, an accidental one, of an accident of the subject.

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<sup>73</sup> Allan Bäck, “Philoponus on the Fallacy of Accident.”

<sup>74</sup> The paralogsms need to be reformulated in order to make the fallacy apparent. Many examples are hard to analyze; I forego this task here.

We have seen Aristotle describing being *per accidens* as having this same structure. Aristotle does not give instances of the fallacy of accident in syllogistic form. Rather, he gives a colloquial ones that, as well as being colloquial, also have as their conclusions the predication of an accident of the subject of another accident. This is reminiscent of statements of being *per accidens* in *Metaphysics* V.7.

Too, the fallacy of accident has a clear relation to the antepredicamental rule. Aristotle states that predicating predicates of accidents of the subject of that subject occasions the fallacy of accident. However, in discussing the antepredicamental rule I have noted that predicating the definition of the accident (i.e., its paronym) of the subject occasions no fallacy. All the instances of the fallacy of accident that Aristotle gives have the feature of predicating an accident of an accident of the subject. Aristotle need only be saying, in that rule, that predicating an accidental attribute of an accident of the subject causes the fallacy of accident and breaks the antepredicamental rule. Hence it is not accidental predication but making statements of being *per accidens* that cause the fallacy.<sup>75</sup> In Chapter Four, I have insisted upon distinguishing statements of accidental predication from statements of being *per accidens*. Aristotle's solution to the fallacy of accident does not rule out the antepredicamental rule's applying to accidental predication.<sup>76</sup>

Aristotle's examples of the fallacy of accident often concern a mistake in sensory perception. Moreover, they are composed mostly of singular terms referring to the individuals that are the proper objects of sense perception. All this points to Aristotle's wanting his theory of knowledge to explain how we come to have knowledge of being *per se* and being *per accidens*.

Indeed, the masked Coriscus example suggests a connection to Aristotle's doctrine of *per se* versus *per accidens* perceptibles. [*De An.* II.6]<sup>77</sup> Aristotle has a view of sense perception wherein an object is perceived under some description. The description uses the expressions signifying items in the categories. Given that Aristotle thinks that statements occur primarily in the soul in a mental language, whose structure is imitated in spoken and in written language, it is not surprising that for him perception occurs linguistically, as expressions and statements.

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<sup>75</sup> Although many modern authors identify the fallacy of accident with accidental predication. E.g., C. L. Hamblin, *Fallacies*, p. 27.

<sup>76</sup> But see the caveats in my discussion of the antepredicamental rule: 'the predication of the accident' has the ambiguity of the item in the category ('whiteness') and its paronym ('white'), and the latter in turn can be read two ways, abstractly or concretely, as implying a subject.

<sup>77</sup> Deborah Modrak, *Aristotle: The Power of Perception*, pp. 69, 79-80, 84, 91.

The *per se* perceptibles may be accidental attributes of substances, like colors and sounds and motion. In a *per accidens* perception, the new description is an accidental attribute of the *per se* perception that is the actual content of the present perception. Both descriptions may be accidents of a substance, or one description may name the substance while the other is an accident of it, or again the *per accidens* perception may be said to be, through its relation to what is presently being perceived. Thus *per accidens* perception looks quite similar to being *per accidens*, as each describes the same relations of accidents to substances.<sup>78</sup>

The perceptibles *per se* (καθ' αὐτά) consist 1) in the perceptibles special to a certain sense, like colors to sight and sounds to hearing and in 2) the perceptibles common to more than one sense, like shape to sight and touch. A perceptible *per accidens* (κατὰ συμβεβηκός) occurs when the object being perceived is described under a description other than the description provided by the present perception.<sup>79</sup> This other description becomes available due to some experience over and above the present perception, as when it is due a) to the past experience of the person perceiving, via memory or belief, or b) to other, outside knowledge of what the object is. An example of the first is when someone sees something yellow, and perceives it to be bitter, because of having eaten a lot of lemons in the past. [*De An.* 425a1-4] An example of the latter is the Coriscus examples of the fallacy of accident, where you perceive some object as a person approaching you, but the object is also known by others to be Coriscus. Then, in that context, Coriscus is a *per accidens* perceptible.

This example contains a routine unnatural predication, 'the one approaching is Coriscus'. However, the context of this example, along with the substantive grammatical form of 'approaching' (τῷ προσιόντι), makes it clear that here the paronymous expression is to be taken concretely. In this way, statements like 'the one who is approaching is known by me' can be well formed, as in the case of conversion. Moreover, Aristotle does not say here [179b1-2] that the one approaching and Coriscus are not the same, but that being the one approaching (εἶναι τῷ προσιόντι) and being Coriscus (εἶναι Κορίσκῳ) are not the same. I have stressed above the difference between S and the essence of S, for anything that is not a substance.

Furthermore, Aristotle uses examples quite similar to paralogsms of the fallacy of accident in discussing *per accidens* perceptibles: looking at a

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<sup>78</sup> Stanford Cashdollar, "Aristotle's Account of Incidental Perception," p. 162, says that the typical case of perception *per accidens* reverses the usual order of subject and predicate. Cf. 418a34-5.

<sup>79</sup> Aristotle assumes that 'x is y' (rightly or wrongly) is always involved in incidental perceptions. Stanford Cashdollar, "Aristotle's Account of Incidental Perception," p. 158.

picture of Coriscus as a likeness of Coriscus versus as a picture; the perception of Cleon's son as Cleon's son versus as white. [425a25-7; *De Mem.* 450b23-451a3]<sup>80</sup> The connection lies in the two descriptions' being accidental to each other, so that although both may be predicated truly of the subject, the object of perception, still there is no necessity for one to be predicated of the other.

In effect, we may say that in his account of *per accidens* sense perception, Aristotle is offering an account of how a statement of being *per accidens* comes about. This amounts to an explanation of how the fallacy of accident is possible, even if the soul accurately receives and mirrors the real structure of the object. Likewise for *per se* sense perception, *mutatis mutandis*. [*De Ins.* 458b31-3]<sup>81</sup>

On account of the connection of the fallacy of accident to perception *per accidens*, most of Aristotle's examples of that fallacy concern singulars. For Aristotle holds that perception concentrates on singulars. General terms are used here only to describe singular subjects. Accordingly, Aristotle does not use universal statements in discussing this fallacy. He says that this fallacy comes about "because of not being able to distinguish the same and the different, one and many, nor to which predicates and to [which] object all these are accidental." [*Soph. El.* 169b3-6] Many modern commentators focus on doctrines of opaque contexts and identity statements.<sup>82</sup> But, instead, I suggest, we should focus on the contrast between what is *per se* and what is *per accidens*. For, as we have seen, in his discussions of 'same', 'different', 'one', and 'many', Aristotle uses again the distinction of being thus *per se* and being thus *per accidens*.

Aristotle's discussion of the fallacy of accident confirms the aspect theory of predication. His discussion of the fallacy of *secundum quid ad simpliciter*, sometimes called the fallacy of converse accident, does so more.<sup>83</sup>

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<sup>80</sup> Deborah Modrak, *Aristotle: The Power of Perception*, pp. 105-6.

<sup>81</sup> Stephen Everson, *Aristotle on Perception*, pp. 188-91.

<sup>82</sup> E.g., Francis Pelletier, "Sameness and Referential Opacity in Aristotle; Nicholas White, Aristotle on Sameness and Oneness;" Norman Dahl, "Two Kinds of Essence in Aristotle," pp. 243; 255. Gareth Matthews, "Accidental Unities," and Frank Lewis, "Accidental Sameness in Aristotle," and *Substance and Predication in Aristotle*, take accidental complexes as "kooky objects".

<sup>83</sup> Much later in the Aristotelian tradition the fallacy of accident and the fallacy of *secundum quid ad simpliciter* were seen as converses, where the former deals with inferences of *simpliciter ad secundum quid*. This terminology survives today; the most common name for the fallacy of *secundum quid ad simpliciter* is 'the fallacy of converse accident'.

*The Fallacy of Secundum Quid et Simpliciter*

The fallacy of *secundum quid ad simpliciter* generally considers all fallacious inferences from statements made in a certain respect to the statement made without that qualification. We may distinguish various types of examples of this fallacy that Aristotle discusses.

One type concerns cases where the inference from 'S is P' to 'S is' is blocked.<sup>84</sup> In effect, Aristotle is discussing here the relation between statements of *secundum adiacens* and those of *tertium adiacens*. So, e.g., at *Sophistical Refutations* 167b1 and again at 180a32-4, Aristotle considers inferences like "if what is not is an object of opinion, then what is not is," and 'being is not a particular being, and so being is not.' Here there is a Parmenidean-style inference from 'S is P' to 'S is' and one from 'S is not P' to 'S is not'.<sup>85</sup>

Evidently, Aristotle, like Plato, does assume that such inferences are well formed and usually valid.<sup>86</sup> He views his task here to consist in specifying and eliminating those cases that do not allow such inferences. He says that fallacy occurs owing to the simple expression and what it signifies being confused with the qualified expression and what it signifies. [*Soph. El.* 167a4-6]<sup>87</sup> Aristotle does not give much theory here, and indeed tends to deal with examples on a case-by-case basis. However, he keeps contrasting the fallacious cases with things said "strictly" ('κυρίως'). [166b37-8; 167a16; 180a23] With the type of examples mentioned above, where the conclusion is of *secundum adiacens*, it is plausible to take 'strictly' here to indicate that the assertion or denial of 'be' is said *per se*. For the premises all are cases of being *per accidens*, as their predicates contain either categorical terms or no assertion of existence. Indeed, when Aristotle speaks about the first example elsewhere [*Int.* 21a32-3], along with the similar example, 'Homer is a poet; therefore Homer is' [21a25-8], he does say that

<sup>84</sup> For a full discussion of the texts see Allan Bäck, *On Reduplication*, Ch. 3.

<sup>85</sup> Against Vincenza Celluprica, "Logica e semantica nella teoria aristotelica della predicazione," p. 169, who sees 166b37-167a6 to distinguish copulative and existential being. A. N. Prior, *Formal Logic*, p. 165, is much clearer on the existential character of the inference.

<sup>86</sup> As did Plato in the *Sophist*. Cf. Michael Frede, *Prädikation und Existenzaussage*, pp. 47-8; Lesley Brown, "The Verb 'To Be' in Greek Philosophy: Some Remarks," pp. 231-4. On the plausibility of the inference cf. Jerrold Katz, *Cogitations*, p. 98.

<sup>87</sup> I say, 'and what it signifies' because Aristotle holds that this fallacy is one of those that do not depend on language. Rather, it depends upon making mistakes about what the language signifies.

the fallacy is occasioned by the predication being *per accidens* and not *per se* as I have discussed in Chapter Six.<sup>88</sup>

So what Aristotle says here agrees with the aspect theory of predication. Moreover, his tacit assumption that the inference from *tertium adiacens* to *secundum adiacens* generally holds does a great deal more to support it.

In the other major type of the fallacy of *secundum quid ad simpliciter*, a simple declarative statement of *tertium adiacens* has its predicate complement qualified so as to constitute a complex. Aristotle then worries about which cases is it legitimate to make the inference to a predication of only a part of that complex. E.g., ‘an Ethiopian is white with respect to his teeth’ does not imply ‘an Ethiopian is white’, whereas ‘an Ethiopian is white with respect to his skin’ does.

Aristotle does not offer general rules here either for this fallacy. Apart from his case-by-case method, he gives only the general advice to look at the contradictory of the conclusion, to see if it be compatible with the premises. [180a23-31] This amounts just to seeing if the conclusion follows necessarily from the premises. Still we can understand Aristotle’s reticence from the perspective of the aspect theory of predication: given that the specification of different aspects constitutes such a fundamental part of Aristotle’s thought and discourse, he would have found the notions of ‘in a respect’ and ‘without qualification’ obvious and fundamental.<sup>89</sup> It becomes an empirical matter to determine the various structures of complexes and the various relations of parts and wholes.

In other texts, Aristotle investigates, conversely, when there are two separate, single predications, in which cases is it legitimate to make the inference to a single predication combining them both.<sup>90</sup> E.g., if Socrates is white and Socrates is a man, then Socrates is a white man, but, if Socrates is good and Socrates is a cobbler, then it does not follow that Socrates is a good cobbler.

Aristotle’s concern with such inferences fits in with the aspect theory of predication. For, just as a simple predicate complement, ‘P’ specifies the

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<sup>88</sup> Jaakko Hintikka, “On the Development of Aristotle’s Ideas of Scientific Method and the Structure of Science,” p. 99, says that this inference holds only for “essential predication” but later says “essential being”. On my view the two differ greatly. David Charles, “Aristotle on Names and Their Signification,” p. 53; n.21, says that Aristotle allows the inference only for simple assertions, having simple names.

<sup>89</sup> Indeed, as I have elaborated in the first three chapters of *On Reduplication*, Aristotle develops a theory of types of respects.

<sup>90</sup> Aristotle himself does not explicitly put the converse inference, of *simpliciter ad secundum quid*, under the fallacy of accident. But in some texts he considers it together with the inference of *secundum quid ad simpliciter*, especially in *On Interpretation* 11. As a result, the Aristotelian tradition came to discuss the fallacy of *secundum quid et simpliciter*. I too find this reasonable, as I have argued in *On Reduplication*.



sort of existence, 'is', further, so too an additional modifier, 'M', may specify the sort of existence, of 'is P', even further.

The rules that Aristotle gives for distinguishing the valid from the invalid inferences here in effect distinguish being *per se* and being *per accidens* once again. When 'P' and 'M' are both accidents of 'S', or when one is an accident of the other, then fallacy will occur. [Int. 21a7-10] These are the same conditions that Aristotle gives for what is said to be *per accidens*. Indeed, Aristotle uses the same example, 'white musical', in both discussions. [21a10-14; *Metaph.* 1017a15]

In discussing when it is valid to drop the qualification in a complex predication, Aristotle considers two types of counterexamples. One type has an opposition between the components of the complex, as in 'Socrates is a dead man; therefore Socrates is a man', where 'dead' implies 'not living' and 'man' implies 'living', according to their definitions. [21a21-3] These examples have the feature that the additional modifier does not specify the existence of the subject further, but somehow nullifies the original specification. Indeed, what happens is that the new modifier changes what is without it a predication of being *per se* into one of being *per accidens*. For, if Socrates is a man, then Socrates exists, but, if Socrates is a dead man, he does not exist. Rather, the latter statement asserts that Socrates once existed as a man but does not live any more. So too 'Socrates is a fake man' denies that Socrates was ever a man at all, and asserts that "Socrates" has the appearance and behavior of a man, while not being a man.

The other type, *mirabile dictu*, concerns the case where 'is' is predicated in a statement of *tertium adiacens*, as in 'Homer is a poet; therefore Homer is'. [21a25-8] I have discussed this text already. But what is striking in this context is that Aristotle evidently considers 'is a poet' to be a complex predicate, having 'is' and 'poet' as components, on a par with 'dead man', having 'dead' and 'man' as components. Here Aristotle treats 'is' as simply one predicative component among others, whose assertion of existence may be interwoven with other assertions about the subject. This supports the aspect theory, and does not support the copulative theory, which sharply distinguishes 'is' as mere copula from other items constituting the predicate. Again, in light of this passage, the distinction of statements of *tertium adiacens* from those of *secundum adiacens* as a distinction of logical type surely looks wrong for Aristotle. So too, my distinction of two distinct types of instances of the fallacy of *secundum quid ad simpliciter* is an anachronism. Rather, Aristotle holds that an affirmative statement normally makes an assertion of existence, of being *per se*, that can be more or less qualified. A statement of *tertium adiacens* has a qualification added onto the basic assertion of 'is' *per se*. Further qualifications can be added to it in complex predication. When Aristotle distinguishes the two cases of the fallacy of *secundum quid ad simpliciter*, he uses similar language: the first

is “in part” and “without qualification” [166b39]; the second is “in a respect” and “without qualification”. [167a7] Aristotle seems to be assuming that statements of *secundum adiacens* and *tertium adiacens* have similar logical structures. All this supports the aspect theory.

### *Conclusions*

The aspect theory of predication, along with its attendant doctrines on paronymy, being *per accidens*, and the distinction of ordinary from protocol language, provides a way to interpret Aristotle’s views on logical inference. Inferences like A to I (and E to O) do not look so silly now. The antepredicamental rule becomes consistent with the *dictum de omni*. The fallacy of accident does not rule out the accidental predications that Aristotle uses in his syllogistic and demonstrations. Homer can “be” a poet without existing now.

## CHAPTER NINE

### CONSEQUENCES

For the Hindu the ultimate goal of philosophy is liberation...Patanjali...included in the aims of grammatical study the attainment of heaven through the correct use of words.<sup>1</sup>

Here I summarize the results of my investigation of how the aspect theory of predication works as an interpretation of Aristotle. First, I shall present in summary form the chief features of the aspect theory and its main, traditional rival, the copulative theory of predication. I then list some of the ways in which the two theories fail or succeed in comparison with each other as an interpretation of Aristotle's texts. Next, I present the new doctrines or emphases my interpretation of particular texts and issues in Aristotle has advanced. I also consider briefly the fit of the aspect theory of predication with Aristotle's metaphysics. I then consider later interpretations of Aristotle and theories of predication with an eye to showing how and why the copulative theory has come to dominate, and the aspect theory to disappear from, the current Aristotelian scene. Finally, I consider the worth of the aspect theory as a logical theory, in comparison with modern logic. There I shall consider the work of Brentano and the approach of free logics in addition to modern classical logic. All this will be sketchy, but will serve to point out ways in which my interpretation may have some use.

#### *The Aspect Theory*

According to the aspect theory of predication, every statement, strictly speaking, makes an assertion of existence, whether one of *secundum adiacens*, like 'there is a cow', or one of *tertium adiacens*, like 'the cow is purple'. In normal contexts, of being *per se*, 'is' signifies real existence or presence. 'S is' means 'S exists'. Additional predicates may specify the type of existence further. A statement of *tertium adiacens* has the logical form, 'S is (existent) as a P', which makes two claims: 1) S is existent 2) 'P' is predicated of S. The existence is to be determined further: existence

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<sup>1</sup> Harold Coward and Kunjunni Raja, *The Philosophy of the Grammarians*, p. 44. Cf. Bharthari, *Vakyapadya* 14: "grammar is the door to liberation, the remedy of blemishes of speech, the purifier of all branches of knowledge."

with hooks. The denial, 'S is not P' means that it is not the case that S is P, i.e., that either S does not exist or that P is not predicated of S. The metathetic affirmation, 'S is not-P', means that both S exists and that 'not-P' is predicated of S.

On this view, when Aristotle says that 'is' is "additionally predicated" in a statement of *tertium adiacens*, he means 'predicated in addition': 'is', the *tertium adiacens*, is predicated in addition to the predication of 'P', the *secundum adiacens*. 'Is' then has a single sense, a structure that is both existential and copulative: "existence with hooks".

However, not all declarative sentences are statements, i.e., statements of being *per se*, which include both essential and accidental predications. Some, like 'the goat-stag is illusory', assert only being *per accidens*, and this in turn may be understood to assert existence only *in intellectu*, or merely to connect the predicate to the subject. Sentences having an indefinite verb ('not-walks') make a metathetic affirmation of being *per accidens*. These have an amphiboly with denials of being *per se*. Likewise, 'Socrates is walking' could be taken as an affirmation of being *per se* or of being *per accidens*. Aristotle inherited these amphibolies from Parmenides et al. as well as Plato's distinctions unraveling them in the *Sophist*. In his logical theory he tries to eliminate them by constructing an ideal, protocol language.

The ideal language concerns only being *per se*. The terms allowed in it for subject ('S') and predicate ('P') must signify items in the categories. Only abstract names ('redness'; 'being two meters tall') signify items in categories other than substance. A paronymous term ('red'; 'two meters tall') must be read concretely ('the thing that is red'). In this way Aristotle can keep his doctrine of unnatural predication while allowing for conversions of premises.

### *The Aspect Theory as an Interpretation of Aristotle*

Here I shall summarize my results on the adequacy of the aspect theory as an interpretation of Aristotle's logical views. As its main rival has been the copulative theory, I shall make my summary while also contrasting the two. Of course, the adequacy of any interpretation rests finally on how well it explains the details of the text. I have tried to do that in the earlier chapters.

So, by way of a foil, let me then summarize the copulative theory.<sup>2</sup> On the copulative interpretation, the copula 'is' changes its logical function de-

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<sup>2</sup> Many modern scholars have attributed it to Aristotle. Cf. William and Martha Kneale, *The Development of Logic*, pp. 58-9; 64-6; J. L. Ackrill, *Aristotle's Categories and De Inter-*

pending on its sentential context. In a statement of *secundum adiacens*, it makes an existence claim: 'is' in 'S is' means that S is existent and connects the existence claim to the subject. In a statement of *tertium adiacens*, 'is' connects the predicate term to the subject without making any additional claim of existence. On this analysis, there are two terms, the subject term and the predicate term. These terms appear to be names in some sense. When the predicate term 'P' has the copula attached to it to form the predicate, 'is P', there is then a verb. Most versions of the copulative theory assume existential import for statements of *tertium adiacens*. (The simple denial, taken as the negation of the simple affirmation ('not (S is P)') need not have existential import, although most versions assume this too.) The existential import in an (affirmative) statement comes either from the content of a subject term that is presupposed to exist or, perhaps, from the verb. For the verb consignifies time, and so may limit the indefinite name to standing for what exists at a certain time. But, if from the verb, does not the verb in a statement of *tertium adiacens* also make an assertion of existence?

Many of the problems of interpreting Aristotle's remarks on predication have answers on either theory. Still, in both cases, as with any interpretation, Aristotle's texts will have to be stretched and augmented to match. Here I compare, in summary form, the copulative and the aspect theories as being adequate interpretations of Aristotle's doctrines. I omit those features where the two interpretations would not have to differ decisively.

**Existential Import** The aspect theory explains why Aristotle would hold all affirmative statements to have existential import, because such statements state directly that the subject exists, that is, because of Aristotle's conception of a statement as an assertion of being *per se*. (In general, Aristotle does not accord existential import to negative statements, except perhaps in his syllogistic and science where he wants to take them "privatively", sc., like metathetic affirmations.)

The copulative theory has difficulty here. It has 'is' asserting existence and connecting that claim to the subject in a statement of *secundum adiacens* ('S is'). However, it takes 'is' to change its function in a statement of *tertium adiacens*. Here the 'is' is said not to be "additionally predicated" but only to connect subject and predicate. Accordingly such a statement makes no explicit existence claim. At best existential import must be presupposed in virtue of the content of the subject term. Most versions of the copulative theory do not make much of the point that for Aristotle the "copula" consignifies present time and existence.

Moreover, consider claims like ‘the goat-stag is illusory’. The aspect theory handles such cases by distinguishing being *per se* and being *per accidens*. Existential import holds only for statements of being *per se*. Normally, except when refuting sophists, Aristotle uses these. In his protocol language, Aristotle restricts terms to those signifying items in the categories. Here we get a result much like the presupposition of existence on the copulative theory.

In contrast, the copulative theory has ‘is’ fulfilling one main function a statement of *tertium adiacens*, to couple subject and predicate. It is hard to see why two merely coupling relations are to be distinguished so as to give existential import for, e.g., ‘the dog is red’ but not for ‘the goat-stag is red’. Making existential import come from the content of the terms would make logical rules of inference have much more complex forms than Aristotle gives or we want. Note that a predication of being *per accidens* looks quite like the pure copula of the copulative theory!

**Subalternation** On the aspect theory Aristotle’s claim of the A to I inference will follow according to current standards, for the subject term of the A proposition will always have existential import stated explicitly. There is no need to justify the E to O inference since Aristotle does not maintain it. In contrast, the copulative theory cannot justify A to I subalternation very well. Indeed, its failure here has contributed to the disrepute of Aristotelian logic. Perhaps this failure is due to using the wrong interpretation! Moreover, on it Aristotle should probably sanction the E to O inference too, if existence of the subject is presupposed for both true and false statements—given that we want the falsity of an affirmative statement to imply the truth of the contradictory negative statement, and *vice versa*.

**Metathetic Predication** With its overt existential import the aspect theory can explain satisfactorily why Aristotle says that statements of the form, ‘S is not-P’, require that S exists. However, the copulative theory should hold that no existence claim is being asserted, although its usual versions do not hold this view. The existential presupposition condition does not work well here. For then we would need two different squares of opposition, one for terms with existence presupposed, the other where it is not.<sup>3</sup> This point applies both to metathetic predicates and A to I subalternation. Yet Aristotle shows no indication of having multiple logical squares and theories.

**Relation Between *secundum adiacens* and *tertium adiacens*** According to the aspect theory, there is a smooth transition between statements of these two sorts, which would not constitute radically different logical types:

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<sup>3</sup> Stephen Barker, in his textbook, *The Elements of Logic*, pp. 31-5, actually constructs and teaches two squares of opposition.

S is P (being *per se*); therefore S is. Indeed, this fits Aristotle's practice, e.g., in discussing the fallacy of *secundum quid et simpliciter* and in discussing the relation of existence, definition, etc. in the sequence of scientific inquiry. In contrast, the copulative theory holds these two sorts of statements to constitute radically different logical types. In this way, it resembles modern logical theory more than the aspect theory does, but at the cost of ending up as a merely inferior, preliminary version of modern logic.

**The Fundamental Forms of Statements** Aristotle takes 'S is' to be the basic form of the statement, and 'S is P' to be a further refinement of it. His doing so is reflected too in his view that 'whether S is' is the basic question in scientific inquiry, and in his *dictum* that being *per se* is said in as many ways as there are categories. Once again Aristotle assumes a smooth transition from *secundum* to *tertium adiacens*, a move surely more congenial to the aspect theory than to the copulative. Likewise, the aspect theory explains his remarks about "additionally predicate" more in accordance with ordinary usage of 'προσκατηγορεῖσθαι' than the copulative theory does.

**An Indefinite Name Plus Verb** Aristotle omits saying that such a complex is a statement. The aspect theory explains why he would do so, on account of his distinguishing statements sharply from sentences: a name plus indefinite verb makes an affirmation of being *per accidens*. The copulative theory says that he does so because this complex is equivalent to a simple denial anyway. But then it is odd that Aristotle does not say so.

**Conversion** Here the copulative theory has an advantage, as it considers a statement to consist of two terms related by a copula. On this tripartite analysis, it would be natural to consider inferences where the terms change places in the relation. The aspect theory does seem to resist more the switching the subject and predicate, as the predicate is a verb that as such cannot be in subject position.

Nevertheless, in explaining the details of what Aristotle says about conversion, and its relation to others of his doctrines, the aspect theory fares much better. It also explains why the bipartite and tripartite analyses are not mutually inconsistent. After all, Aristotle does switch back and forth between them. So, as an interpretation of Aristotle, if not as a logical theory, the copulative theory does not fare well here either. The aspect theory also explains why Aristotle would take the negative universal statement to be a metathetic affirmation and not a simple denial much more satisfactorily.

**Paronymous Expressions as "Verbs"** In some texts Aristotle seems to call a predicate complement like 'white' and 'not-white' "verbs". This text conflicts with the bipartite aspect theory, and is more congenial to the tripartite, term approach of the copulative theory. However, these texts are not too decisive, and, in any case, create difficulties for any interpretation.

To be sure, a tension arises between the bipartite analysis, with its insistence on having a proper subject and its rejection of unnatural predication, and the tripartite analysis, with its readiness to convert subject and predicate and its inclination to read a simple predication as a relation between two terms. But that tension occurs in Aristotle's own thought. I have tried to show how Aristotle deals with that tension so that the inconsistencies be eliminated: take the paronymous term concretely e.g., 'the white' as 'the thing that is white'. This move has support from Aristotle's metaphysics. Perhaps he has failed to make these doctrines consistent. Still that failure presents no strong objection to my main thesis, that the aspect theory is Aristotle's theory of predication.

Furthermore, in the course of developing my interpretation of Aristotle's theory of predication, I have stressed the importance of certain doctrines in Aristotle that often are not considered especially important, either in the Aristotelian tradition or in current scholarship: being *per se* and *per accidens*; an ideal, protocol language, where the language mirrors the ontology; paronymy. Too I have shown how using the aspect theory solves various problems in understanding Aristotle: existential import; the relation of *Categories* 2 & 4; the place of *differentiae* and *propria*; the predication of matter; unnatural predication; the square of opposition; the modal syllogistic. The viability of the aspect theory stands independently of most of these applications. For I have made additional assumptions and interpretations for them. Still, they support it indirectly. For the problem-solving ability of a theory motivates its acceptance.

### *A Single Science of 'Is'*

This aspect theory of predication agrees with, if not explains, Aristotle's approach in the *Metaphysics*. As he says in *Metaphysics* IV, "being (*τὸ ὄν*) is said in many ways"; we might as well say: the 'is' is said in many ways. [1003a33] The special sciences, he says, "cut off a part of being" and investigate the attributes of that part. Thus, physics investigates the movable *qua* movable, and mathematics "investigates the attributes of things *qua* quantitative and continuous". [1061a34]

"Cutting off a part of being" amounts to concentrating on one of the respects in which a subject is said to be. We take the basic assertion of 'is' and divide it into parts.<sup>4</sup> We may classify assertions made in terms of the type

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<sup>4</sup> Mario Mignucci, "Aristotle's Theory of Predication," p. 13, takes the part-whole relation to be Aristotle's predication relation.



of the P terms contained in them. Aristotle has isolated ten fundamental schemata of predication, ten categories. Within each of these categories, there will be subdivisions, and attributes proper to each of those subdivisions. A special science may concern itself with an entire category, with one of its subdivisions, or with only certain attributes of certain subdivisions.<sup>5</sup> So physics is concerned with the movable *qua* movable. The movable is an attribute peculiar to certain sorts of substances, namely, perceptible substances. Further, for Aristotle, there are two types of perceptible substances, the eternal and the perishable. [1069a30-1] Terrestrial physics deals with the attribute of motion of the perishable perceptible substances; celestial physics, or astronomy, deals with the motion of the eternal perceptible substances. Mathematics deals with one or the other of the quantitative aspects of perceptible substances.

So Aristotle has a compartmentalized approach where he deals with the various aspects in which something is said to be, and with aspects of those aspects, and even with aspects of the aspects of those aspects. In all this multiplicity, we might wonder where is the unity of science, just as we might worry where is the unity of predication when statements assert that the subject *is* in various, fundamentally different ways.

At any rate, Aristotle does worry about such matters. His approach follows, or perhaps mirrors, his doctrine about the unity of predication. Even though the categories represent ten fundamentally different types of predication, there is still a unity of predication, since all affirmative predication of being *per se* make a fundamental assertion of real presence. That existence can be specified further by one of the categories, “the figures of predication”. Ultimately, for the subject term of that predication to be “natural”, it must either be a substance term or presuppose one. Likewise, in his ontology, Aristotle sees a unity of being, and hence a single science of being *qua* being is possible, because substance ends up as the focal point with reference to which everything is said to be.

Indeed, Aristotle’s actual procedure suggests how much he keeps his concern with the structure of predication in mind in his ontological investigations. He wonders how there may be a single science of being if being is said in many ways. He goes so far as to enumerate the various uses of ‘is’: the accidental, the true, “the figures of predication, e.g., the ‘what’, quality, quantity, place...” [1026a36-b1], the potential and the actual, and proceeds to ask of which of these can there be a scientific treatment. He rejects the accidental as offering nothing suitably determinate for scientific treatment,

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<sup>5</sup> It must be recalled that the categories are not mutually exclusive, but overlap. Consequently this scheme becomes quite complex in practice.

and the true (alethic) as pertaining not to ontology but to psychology and logic. He then intends to treat 'being' in its other uses, and begins again: "Being is said in many ways." [1028a1] Then he goes on to argue that what primarily is substance, and seeks to determine what is substance. This investigation too agrees with the structure of a statement on the aspect theory.

### *Later Developments*

It might be objected: if the aspect theory is such a good interpretation of Aristotle, why has it so little prominence today? This question requires mostly a historical explanation. Accordingly, I shall sketch some of the later developments of Aristotelian theories of predication. After all, if Aristotle did hold this theory, surely it is likely that at least some of those continuing his philosophical enterprises would have recognized this, and also explicitly talked about the theory. Some comprehension of this later history will enable us also to understand why the aspect theory has been neglected as an interpretation of Aristotle.

The copulative theory has for the most part prevailed in the Aristotelian tradition. I hazard the guess that this prevalence over the aspect theory comes in part from the later appropriation of Aristotle's logic by the neo-Platonists who might well have found the copulative approach much more congenial to the existence of Forms.<sup>6</sup> For, in effect, the copulative theory has the same logical structure of participation: the subject partakes of the predicate. One could easily take the converse relation as "belonging to". Questions of being might best be left to the subject and predicate terms: Forms and individuals both have "Being" but "exist" in different ways. Even for Aristotelians, connecting existence to the predication relation construed in this way would matter little, so long as the discussion were limited to terms designating items in the categories.

The aspect theory was held most clearly by Avicenna, Ockham, and Buridan, and perhaps by others like some Stoics and Philoponus. In general, it seems, this interpretation went along with the view of space as a three-dimensional continuum as opposed to place. At any rate, those who held this dimensional view of space tended to hold this view of predication, although the situation becomes more complex with the fourteenth-century nominalists.

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<sup>6</sup> That it is a late theory is perhaps suggested by the striking fact that even as late as Ammonius there was no special word for 'copula'. See Jonathan Barnes, "Grammar on Aristotle's Terms," p. 189, n. 48.

The copulative theory was held clearly by Ammonius (following Proclus), Boethius, Al-Farabi, Averroes, Albert the Great, and Aquinas. Abelard did assert it emphatically, but seems to have had reservations about and deviations from it.

**Stoics** The lack of texts in the Late Greek period hampers the picture in the Late Greek period for those like Theophrastus. However, for the Stoics, we do have some secondary accounts, as well as a discussion by Alexander of Aphrodisias, who discusses their views on negation in order to disagree with them. In effect, the Stoics have an aspect theory: 'S is P' asserts that there exists something that is both S and P.<sup>7</sup> Accordingly, 'S is not P', construed as the denial, 'not (S is P)', will have disjunctive truth conditions.<sup>8</sup> In contrast, the Stoics took the metathetic 'S is not-P' as a simple affirmation, requiring the existence of the subject.<sup>9</sup> This has features of an aspect theory: 'is' makes an existence claim, even in a statement of *tertium adiacens*. Its denial has disjunctive causes of truth: either the subject does not exist or the predication does not hold.

The main source for the views of the Stoics lies in a polemical discussion in Alexander's commentary on the *Prior Analytics*.<sup>10</sup> Alexander says:

For they say that Callias' not walking is twofold, in one way where the negative particle has been attached to the whole, 'Callias's walking' [or: that Callias walks], which too is a denial; in another way where it is attached to the predicate only <'Callias does not walk'>, which they say is no less an affirmative statement. They are persuaded of this by 'Callias walks' and 'Callias does not walk' (Καλλίας οὐ περιπατεῖ) being able to be true together

<sup>7</sup> Alexander, in *An. Pr.* 402,23-36.

<sup>8</sup> Walter Cavini, "La negazione di frase nella logica Greca," pp. 27-8; 69. R. M. Dancy, "Aristotle and Existence," pp. 426-8, claims that Aristotle has existential import only for affirmations, whereas the Stoics do so for both affirmations and denials.

<sup>9</sup> Benson Mates, *Stoic Logic*, pp. 31; 34; Michael Frede, *Die Stoische Logik*, pp. 70-1. Richard Goulet, "La classification des propositions simples selon Diogène Laërce," pp. 69-70, says that the Stoics (and Apuleius) and Aristotle took 'it is not the case that S is P' differently: the Stoics took it to deny the simultaneous existence of S and P, while Aristotle took it to deny "la réalité du rapport entre la sujet et le prédicat." But then Aristotle would be equating 'S is not P' and 'S is not-P', and this contradicts his views in *On Interpretation* and *Prior Analytics* 1.46. He sees here a break from Aristotle's copulative theory of predication.[!]

<sup>10</sup> Diogenes Laertius, *Vitae Philosophorum*, VII.69-70. Antony C. Lloyd, "Definite Propositions and the Concept of Relevance," p. 291; Walter Cavini, "La Negazione di Frase nella Logica Graeca," p. 53. Jonathan Barnes, "Peripatetic Negations," n. 4, thinks that the group was Stoic but not Chrysippus or another known to Alexander by name, as he normally names names. Another possibility is that the group consists of some Peripatetics with whom Alexander disagrees. For, as we shall see, they accept a lot of Aristotle doctrines. But then so do Stoics. I shall follow convention and call them "Stoics".

at some time, while those opposed contradictorily<sup>11</sup> can never come to be false together. For, when Callias does not exist, they say that 'Callias does not walk' is no less false than 'Callias walks'. For in them both what is signified is that there is a certain Callias, and to this [man] walking or not walking belongs. However, 'it is not the case that Callias walks' itself cannot also be false when the affirmation, 'Callias walks', is false. [402,8-19]

They say that the cause of those opposed in this way coming to be false of these at the same time is the same: for in this way, [they say,] the one saying 'this man does not walk' says something equal to 'there is this [man] indicated, who does not walk'. [402,28-30]

Thus these Stoics say that 'S is P' and 'S is not P' can be both false if S does not exist, whereas exactly one of 'S is P' and 'not (S is P)' are true, and the other false. They take 'not (S is P)' to assert that either S does not exist or 'P' is not predicated of S.<sup>12</sup> 'S is not P', where the verb is denied, asserts the existence of the subject: it amounts to the metathetic 'S is not-P'. For the Stoics only the present "is", or exists; the past and future only "subsist". They routinely use 'belongs (ὑπάρχει)' in this strong sense.<sup>13</sup>

Alexander argues against these Stoic views:

Again, it is true to say 'what is is', whereas saying that there is some 'is', to which 'is' belongs, is altogether impossible. Also, that the impossible is impossible is true, whereas 'there is something impossible to which its being impossible belongs' is false. Also, it is necessary that all those that run move, but that there be something running, which moves by necessity, is still not necessary. Also, it is necessary that everyone damaged in the heart dies, whereas that there be someone damaged in the heart is not necessary. For too, if names in propositions signify this, then too they would signify the same thing when said by themselves. In this way too everyone who states a name would be stating an affirmative proposition. Again, <if> he who says 'Socrates walks' says something equivalent to 'there is a certain Socrates, and that one walks', then he who says 'Socrates is not' would be saying something equal to 'there is a certain Socrates, and that one is not [does not exist]', which is incomprehensible. Also the former, 'Socrates does not exist', is true, whereas the latter, that there is a certain Socrates who does not exist' is false. [404,18-31]

<sup>11</sup> Jonathan Barnes, "Peripatetic Negations," n. 9, reads "in opposition" instead.

<sup>12</sup> Walter Cavini, "La negazione di frase nella logica Greca," p. 67; Apuleius, *De Interpretatione*, 16-30. The Stoic view may be contrasted with that of the skeptics, who deny any existential import for negative statements. Cf. Diogenes Laertius, *Vitae Philosophorum*, IX.74-6.

<sup>13</sup> Strobacius I.106,18-23 (SVF II.509). Andreas Schubaert, *Untersuchungen zur stoischen Bedeutungslehre*, pp. 151; 174. He cannot understand, p. 152, why Chrysippus compares such a "belonging" with the belonging of accidents, but we can.

Alexander has a lot of seemingly misdirected attacks against the Stoic views. (They seem directed mostly against the analysis of a statement into a complex subject: there is a P-S.) Still, one of Alexander's examples addresses the main issue: 'the impossible is impossible'. Construed as a statement of being *per se*, it asserts that the impossible exists, as impossible. Aristotle would handle it as an assertion of being *per accidens*. But these Stoics seems to restrict themselves to being *per se*. As a statement of being *per se* it is false.

Alexander says that 'the impossible is impossible' is true and does not assert the existence of its subject. A statement of *tertium adiacens* does not assert that its subject exists. Rather, it asserts that, if the subject is as it is (S), then it is P. Alexander appears to be taking an affirmation hypothetically, as modern logicians take universal statements today. For he likens them to the modal cases: 'necessarily whatever runs moves' means that if something is running, then it by necessity is moving, and not that there exists some object that is running that moves by necessity. Just as the necessity is hypothetical and not absolute, so too the existence of the subject. This view does not give a purely copulative theory (as Abelard will have), where all 'is' does is to connect subject and predicate. For it serves to designate the time of the predicate and to make the supposition, or pre-supposition, that the subject exists. Yet the existence of the subject does not appear as an explicit assertion of the statement.

Alexander argues that, if 'S walks' and 'S does not walk' are both false when S does not exist, then so too for 'S is' and 'S is not'. [404,12-405,16] He gives the denials the form of 'S exists as not-P', just as Aristotle takes denials in his syllogistic privatively. Then 'S is not' implies both that S exists and that S does not exist. But 'S is not' implies 'S is' only if the Stoics take 'S is not' as a metathetic affirmation, where the indefinite verb is predicated of 'S'. But they need only take it as the simple denial of the affirmation—'not (S is)'—to avoid contradiction.

Barnes tries to extract "a reasonably coherent view" for Alexander. He wonders how he would handle 'Callias walks' and 'Callias does not walk' when Callias does not exist now.<sup>14</sup> We have seen that the Stoics would take them both to be false only if the denial is taken as a predication of a metathetic name: 'not-walking is predicated of Callias'. The simple denial, 'it is not the case that Callias walks', is true when Callias does not exist now. Barnes notes that, if Alexander is committed to 'Callias does not walk' being false, he is "scuppered". Barnes then tries to save him by giving him the view that I have attributed to the Stoics. But Alexander, in the

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<sup>14</sup> Jonathan Barnes, "Peripatetic Negations," pp. 212-3.

fragmented text we have, does not discuss this example. So who knows if that view is his. The problem comes from Alexander's maintaining Aristotle's position in the syllogistic. Normally Aristotle takes the simple denial there [E] to be metathetic.<sup>15</sup> Following Aristotle, Alexander should take both 'Callias is walking' and 'Callias is not walking' to be false when Callias does not exist. But he is not scuppered thereby, so long as he handles 'S is not' as a simple denial.

This interpretation does come at a price: the syllogistic will not apply to claims about the impossible, but only to what exists *per se*.<sup>16</sup> The result does agree with Aristotle's rejection of the study of not-being, his protocol language, his taking denials metathetically in his syllogistic, and his views on subalternation. But why not syllogize about the impossible and have a logic for being *per accidens*?<sup>17</sup>

In any case, these arguments between Alexander and the Stoics do show that issues raised in the aspect theory had prominence in post-Aristotelian philosophy. This result supports the aspect theory as an interpretation of Aristotle's views on predication.

These two points become major difficulties for the Aristotelian tradition: 1) should logical inference, the syllogistic, be restricted only to terms having existential import? 2) Are statements like 'not-being is not-being' ('a chimera is a chimera') true, and, if so in what sense? I have discussed Aristotle's views above. But, in light of the complexities and obscurities of his position, as well as the later reluctance to admit being *per accidens*, it is understandable why later Aristotelians would find these questions major problems.

**Alexander** What view of predication does Alexander hold? Given that in the clearest texts dealing with predication Alexander is discussing Aristotle's syllogistic, or arguing against other views, as above, his views about predication in general become hard to uncover. For in the syllogistic Aristotle takes denials "privatively" and focuses on categorical terms signifying what exists. Under these conditions, the aspect theory and the copulative theory (in some of its versions) give similar results.<sup>18</sup> Even if Alexander

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<sup>15</sup> Cf. Alexander, in *Metaph.* 371,21-3: "Similarly too he who says 'Socrates is not-white', predicating 'not-white' declaratively, again says that it is true that Socrates is not white. At 371,34-5 he refers to *On Interpretation*."

<sup>16</sup> I have suggested that Aristotle does syllogize about what is *per accidens* through supposing it to be *per se* for the sake of analysis. Like the Stoics, Alexander seems to insist upon only being *per se*.

<sup>17</sup> If you want to talk about non-actual contingent individuals, you may well need a logic of being *per accidens*. But Aristotle does not want this.

<sup>18</sup> Alexander, in *An. Pr.* 45,25-9, sanctions the A to I and E to O inferences, and, 45,29-46,2 takes A and O, and E and I, as contradictory. This does not fit a purely copulative

does have an aspect theory, we can understand how his successors might come to think that they are following his doctrines in advancing a copulative theory. Offhand, Alexander seems to favor the aspect theory, where the occurrence of 'be' makes an assertion of existence. For he says,

Since 'be' (εἶναι) is ordered together with each being, it signifies the same as that with which it is ordered: for 'being' (τὸ ὄν), as it is a homonym, signifies the reality (ὑπαρξιν) of each. [Alexander, in *Metaph.* 371,21-3]

Yet, on the other hand, Ammonius seems to follow him somewhat, and clearly advances a copulative theory. Given the texts we have of Alexander, it is hard to tell, for he considers the statement only inasmuch as it appears in syllogistic.

For 'is' is not a term in such propositions [of *tertium adiacens*], but, when attached, signifies the composition of subject and predicate, and is indicative of the affirmation. [in *An. Pr.* 15,7-9]

Alexander insists that 'is' is neither a term nor part of a term. [15,12; but cf. 14,28-9] He claims that 'is' is not predicated, but is external to the statement. [15,23-16,17] Citing Eudemus, Alexander even goes so far as to reduce statements of *secundum adiacens* to *tertium adiacens*: 'S is' becomes 'S is existent'. [15,16-22] So, in his *Analytics* commentary at least, Alexander keeps close to the tripartite, term logic of the Aristotelian syllogistic. Still it is hard to see how he can keep Aristotle's rules of conversion, as well as the square of opposition and the inference from *secundum* to *tertium adiacens*, if he denies the predication of 'is'.

**Ammonius** Ammonius, although claiming to follow Alexander, is a prime candidate for the copulative theory. For he is a disciple of Proclus.<sup>19</sup> Apparently Ammonius holds the copulative theory. At any rate he is a major source for later logicians who clearly do hold it. Although he never rules out 'is' explicitly from making an assertion of being or existence, he does hold 'is' not to be a predicate, not to be additionally predicated, and only to tie predicate to subject. [in *De Int.* 173,25-6] Moreover, by following the canons of Proclus, he moves away from Aristotle's position. With these views added to his account of the indefinite verb, Ammonius gener-

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theory if terms without existential import be allowed. At in *An. Pr.* 256,8 he takes 'μὴ παντί' as particular.

<sup>19</sup> Ammonius generally follows Proclus throughout his commentaries and will substitute his views for Aristotle's, as he says himself. [E.g., in *An. Pr.* 31,24-5; 39,1-2; 43,30-1] See Daniel Blank, *Ammonius: On Aristotle's On Interpretation 1-8*, pp. 3-5; Sten Ebbesen, "Porphyry's Legacy to Logic: A Reconstruction," p. 20.

ates the tradition of the copulative interpretation, along with its problems, willy-nilly.

Ammonius has the usual account of indefinite names and verbs. An indefinite name is predicated both of beings and not-beings. [41,31-3] Likewise the indefinite verb is “predicated” truly of beings and not beings, as in “the centaur not-heals”. [52,13-6]<sup>20</sup> Ammonius is clear that the indefinite name or verb is taken as a unit. [42,8-15]

Ammonius does distinguish a statement with an indefinite verb from the simple denial, which denies the simple affirmation. But he seems to equate the two logically. He worries a bit about this identification. [157,10-3] But, citing Alexander, he says that a predication of an indefinite verb and a simple denial have the same logical structure, but differ in their grammatical structures. [157,13-24] To be sure, if we take indefinite verbs to make assertions only of being *per se*, Ammonius is right. For, given the existence of the subject, the simple denial and the predication of the indefinite verb, ‘S is not P’ and ‘S not-P’s’, are logically equivalent.<sup>21</sup> Just as Alexander, concentrating on the syllogistic (in his extant works), naturally would focus on being *per se*, so too Ammonius will assume as a default value that all assertions are statements of being *per se*.<sup>22</sup>

Ammonius states Aristotle’s main points clearly. Affirmations require the existence of the subject, be they simple (‘S is P’) or metathetic (‘S is not-P’). [161,35-162,15; 162,34-163,5] Simple denials do not, but may hold for beings and for not-beings. [161,35-7; 162,33-4; 184,7-14] The privative affirmation (‘S is un-P’; e.g., ‘unjust’) has a structure similar to the metathetic but applies to fewer cases: only to what exists and has the present ability to be P now. [156,28-30; 163,12-20; 164,3-19] So a dog is not-just but is not unjust (or just). Ammonius may go a bit beyond Aristotle in stating that a universal statement always implies a particular one of the same quality (A to I; E to O). [92,22-4]

Like others having the copulative theory, Ammonius has a hard time with *On Interpretation* 10. He glosses over Aristotle’s claim that statements of *secundum adiacens* are the fundamental forms. He appeals to *Prior Analytics* I.46 to understand it which he finds “obscure”. [160,33-161,5] In describing statements of *tertium adiacens*, he gives a copulative theory of predication:

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<sup>20</sup> Ammonius, in *An. Pr.* 24,18-9, says, strangely, that ‘a goat-stag by necessity is not’ is a metathetic affirmation. Perhaps he is taking ‘is not’ there as an indefinite verb.

<sup>21</sup> Ammonius, 187,20-2, gives a similar account for the equivalence of the singular simple denial and metathetic affirmation (‘Socrates is not P’; ‘Socrates is not-P’).

<sup>22</sup> Possibly with some modification, as at 70,4-6 Ammonius allows ‘every species’ to be a subject term.



So he says, “when ‘is’ is additionally predicated as a third”, not so as to think it right that there are three predicates in the proposition and ‘is’ holds third place among them, but, that ‘is’ is third in the proposition relative to the two terms, the subject and the predicate—while it itself [‘is’] holds in second place as being predicated and, as it were, being supplementally predicated. (*ἐπι-κατηγορούμενον*). For when we say ‘man is just’, we predicated antecedently ‘just’ of the subject ‘man’, since we proposed that this be asserted of him, but, because this [‘just’] is not sufficient to interweave with him [‘man’] for making an assertion, ‘is’ has been attached to them as binding them, as has been said before, and is supplementally predicated of the subject. In fact we say the whole about him [‘man’], sc., ‘is just’. [165,5-16]

So then ‘is’ serves only to couple the predicate to the subject.<sup>23</sup> Comparing ‘is’ to the modality ‘by necessity’, Ammonius says that

the mode is not part of the premise but is a connective and holds as it were the place of a fastener. For it binds the predicate to the subject. [*in An. Pr.* 24,7-9]

Along with this view, Ammonius changes a statement of *secundum adiacens* into ‘S is existent’ in order to avoid having ‘is’ have other than a copulative function. [*in De Int.* 57,29-32]

Ammonius argues against “those” who wish to consider a simple affirmation to make a single predication of an unnamed subject. In effect they render ‘S is P’ as ‘an S-P is’ or ‘there is an S-P’. [167,15ff.] Taking the statement as a predicative complex, they make the denial by putting the negation in front of the entire statement, as ‘not (there is an S-P)’. These people may well be the “Stoics” attacked by Alexander in his *Prior Analytics* commentary. Ammonius too argues against this view. He claims that ‘there is an S-P’ works differently than ‘S is P’. E.g., ‘Socrates the philosopher is [exists]’; does not signify the same as ‘Socrates is a philosopher’.<sup>24</sup>

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<sup>23</sup> Ammonius seems to be taking ‘προσκατηγορούμενον’ to mean ‘incidentally predicated’, as opposed to ‘additionally predicated’. At best ‘is’ is “supplementally predicated”; i.e., when combined with the predicate complement (‘P’), it forms the verb, which then attaches naturally to a subject.

I have made this distinction in Chapter Four: a term is additionally predicated when it is in a complex predicate and may be truly predicated of the subject separately. E.g., ‘white’ in ‘Socrates is a white man’ is additionally predicated, as it follows from that proposition that Socrates is white. A term is incidentally predicated when it is in a complex predicate but may not be truly predicated of the subject separately. E.g., ‘good’ in ‘Socrates is a good cobbler’ is incidentally but not additionally predicated, as it does not follow from that proposition that Socrates is good.

<sup>24</sup> Likewise, Anonymous, *in De Int.* 20,12ff., says to deny an affirmation not by putting negation in front but before the predicate, again in opposition to the Stoic view.

Yet it is not always the case that when 'is' is a third thing in the proposition, it is thereby also additionally predicated. For in the statement 'Socrates the philosopher is' 'is' is only predicated, and is not additionally predicated because the whole, 'Socrates the philosopher', is taken as one and becomes the subject through the attachment of the article which is not accustomed to be ordered with predicates but only with subjects. [165,16-21]

Moreover, he insists, complex predicates form a single unit predicated of the subject, as in 'Socrates is acquainted with the not-good.' [169,25-170,7] Ammonius admits that in 'there is a just man' 'is' is the predicate and makes an assertion of existence. However, in 'a man is just', 'is' is only "supplementally predicated" (ἐπικατηγορούμενον). Ammonius certainly wants to insist that 'S is P' does not make two predications of the subject, 'is' and 'P'. Rather, there is only the predication of 'P', and 'is' is added onto 'P', if you like, to make the verb. [*in An Pr.* 23,25-24,5] Ammonius does not exactly deny that the simple affirmation makes an existence claim. But he does deny that the simple denial becomes logically the disjunction, 'either S does not exist or P is not a predicate of S'. So Ammonius denies that the simple affirmation makes a statement of existence explicitly.<sup>25</sup> Here we see Ammonius moving towards a declaration of a purely copulative theory of predication.

Ammonius needs to show how his view that 'is' serves only to couple the predicate to the subject and makes no additional predication claim agrees with the doctrines of Aristotle listed above. (Or perhaps he does not, if he is siding with Proclus.) For in discussing the indefinite names he has said that 'a centaur is a not-man', like 'the centaur not-heals', is true. But now he says that the metathetic affirmation, 'S is not-P', is false when S does not exist.

Ammonius makes a start at saving his position by claiming that Aristotle has two senses of "indefinite [sc., metathetic] proposition":<sup>26</sup>

But in this way we must use [the claim] that indeterminate [propositions] contradict one another, if we think it right that one of them is true for each being. But it is perhaps better and more closely following the thoughts of Aristotle to be persuaded from the objects that the indefinite affirmation said without a determinant is in lesser part than the simple denial: for if someone is

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<sup>25</sup> On the other hand, he does say, "For he who says 'man is not-just' says that some man subsists (ὑπάρχει) as not-just, but he who says 'man is not just' asserts that just does not belong to man." [160,5-7] Perhaps Ammonius means only to insist that the metathetic affirmation applies only to what exists. He also claims, 70,4-6, that Porphyry holds that the predicate signifies the ὑπαρξίς of the assertion.

<sup>26</sup> Cf. M. Soreth, "Zum infiniten Prädikat in zehnten Kapitel der Aristotelischen Hermeneutik," pp. 410-1.

a not-just man, this one is not a just man, but indeed it is not the case that if someone is not a just man he thereby also is a not-just man. For indeed in the case where there is not a man at all, the simple denial is true, while the indefinite affirmation is false. But the former attempt at any rate, which Aristotle himself seems to use at the end of the *Prior Analytics*, will be successful for propositions contradicting one another, which was supposed in those, but will not succeed for those that are able sometimes to be true together. Generally it is necessary to know that we use the indeterminate [propositions] that are able to be true together for different parts of the subject, just as with the particular [propositions], as we determined above; however predicating them of one and the same thing either in act or in thought, we say that with that [they] divide suitably always the true and the false. For it is necessary that every being or not-being happens to be or not to be a just man. [162,17-35]

The indefinite statement, like all others in *On Interpretation* 10, he says, assumes the existence of its subject, whereas in *Prior Analytics* I.46 it does not. But, if 'S is not P' holds true only when its subject exists, then, e.g., the simple denial and the metathetic affirmation will become equivalent.

For everything that is not just must be not-just, as 'is' when it is said of a not-being is predicated *per accidens*, and everything that is not-just must not be just... [186,14-6]

Ammonius is getting into trouble here. For he has made his position consistent only by attributing to Aristotle two conceptions of the metathetic statement. But Aristotle (or the text at least) refers to the *Prior Analytics* in *On Interpretation* 10 and shows no indication of having two different conceptions. Moreover, Ammonius has made the syllogistic now have propositions of being *per accidens*. [Cf. 186,6-17]<sup>27</sup>

Ammonius seems aware of some of these problems. He says that Aristotle has given in *On Interpretation* 10 only some of the consequences holding between the statements listed there. He appeals to the canons of Proclus to guide the way for the others. [181,28-182,25] I do not wish to set out these rules (which do not give all possible inferences) nor analyze them here. Rather, I wish only to point out that these canons allow for consequences both ways, i.e., the consequences according to these canons become equivalences. For the rules say to keep the subject and quantity the same and to reverse the quality (affirmation/denial) and quantity of the statement. E.g., 'no man is not-just' follows from 'every man is just', but also *vice versa*. Aristotle himself never endorses such equivalences

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<sup>27</sup> Walter Cavini, "La negazione di frase nella logica Greca," p. 23, notes that Ammonius' interpretation conflicts with *Prior Analytics* 51b25-7. Also cf. Ammonius on 'a goat-stag by necessity is not', cited above.

(explicitly) in *On Interpretation* 10. Now Ammonius holds that Aristotle does so implicitly in conceding the equivalence of 'some man is just' and 'not every man is not-just' at 20a19ff. [183,17-35; quoted next] But Aristotle does not state this exactly there.<sup>28</sup>

Ammonius makes some attempt to justify his view and to show how it can handle statements like 'the goat-stag is a goat-stag':<sup>29</sup>

If someone doubts how the canons stated above about the consequence of propositions are consistent with the case of not-beings, as with goat-stag (for the simple universal denial, that 'just' happens to belong to no goat-stag is true in its case, while the metathetic universal denial, asserting that 'not-just' belongs to every goat-stag, is false, but this too needs to be true, if indeed the canons given hold without fault), first let it be understood that Aristotle not only in these cases asserts that the particular metathetic denial follows from the particular simple affirmation and converts necessarily with it, [in the passage] where he says "the [proposition] opposed to 'some man is just' is 'not every man is not-just'. For it is necessary that there be some," sc., some just [man], if indeed the denial is true, but also where he determines about the consequence of propositions of indefinite subject and insists that the metathetic universal affirmation signifies the same as the universal simple denial. For, he says, "'every not-just [thing] is a not-man' signifies the same as 'no just [thing] is a not-man'," as they are clearly considered the same also in the case of universal propositions having the subject determinate. For some difference besides the subjects does not happen for propositions following one another. Next consider that, alleging that some being or not-being can be neither this nor not-this, like 'neither good nor not-good', conflicts with common thoughts. For of all those affirmed in this way the determinate ones are true only in the case of those naturally receiving them, when they share in them in act, and must be false in all cases besides them, while evidently the indefinite ones will hold as opposed to them in virtue of being true and being false. For 'is not just' is not only true in the case of unjust men or those having a middle state or not yet naturally sharing [in it], but also in the case of stone, say, and in the case of the notorious goat-stag. If he supposes that for 'is' to be said to belong truly of some not-being is monstrous, and would gen-

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<sup>28</sup> Ammonius' best evidence is 20a20-3 which he interprets as follows: "Then he says 'no man is just' follows from 'every man is not-just', while 'not every man is not-just' follows from 'some man is just'. For, he says, it is clear that when 'not every man is not-just' is true, it is necessary that some man is just: for when 'some man is just' is false, 'not every [man] is not just', which was supposed, is not longer true, but 'every [man] is not just', which conflicts with it." [181,21-7] But the context looks dialectical, and may rely on the particular subject term, 'Socrates'. Aristotle need not endorse the equivalence of 'some man is just' with 'not every man is not-just'. He need only say that, given that some man is just, it is necessary that there be some man, and hence...

<sup>29</sup> Ammonius admits, 185,6-7, that 'not being is not being' must be true. Cf. *Metaphysics* 1003b10.

erally believe it to change into the 'be' of which this is not predicated, learn first that the things said about such a proposition's not being negative carry over badly into its not being true. For a denial is suitably said not to be, because it generally asserts something to be, even if indefinite, but not because of this shall we say that it is said falsely, or to make the object of which it is predicated, a being. For if 'is' *per se*, by itself, is predicated of a not-being, as in 'a goat-stag is', something would be said, but at present the whole, 'to be not-such', like 'not-just', is said to belong to it, but not 'is' simply. For here 'is' is predicated of goat-stag *per accidens*, just as in what follows [Int. 11] it will be said about the proposition that Homer (who is no longer) is a poet. And the proposition in these cases will be no less true than in those about some being that is not receptive [of justice] or about some man not having justice, as when we say, 'the stone is not-just' or 'Anytus is not-just'. If it be sought how we say that 'not-just' belongs to a goat-stag that somehow is and speak truly, we shall speak to our thought, of which we shall say and predicate truly 'fantastical' and 'named', determinate beings in fact. For what is in no way is neither fantastical nor named nor receives any other predication... [183,17-184,29]

Ammonius first attributes to Aristotle consequences that he does not state, at least explicitly. Next, in effect, he attacks Aristotle's claim that in the case of what does not exist 'neither P nor not-P' holds. Ammonius charges that this locution conflicts with common usage and sense. Fine, but Aristotle is constructing an ideal, protocol language. For Ammonius, like Plato, 'is P' and 'is not P' both require an existing subject. He himself speaks of "the reality (ὑπαρξιν) signified by 'is'". [in *An. Pr.* 24,16] So then what to do with non-existent subjects like 'goat-stag'? Ammonius gives two answers: 1) take 'is' there to be only *per accidens*, as with 'Homer is a poet'. [in *De Int.* 211,31-212,6; 213,10-6] But Ammonius has not given an account of being *per accidens* even while discussing the indefinite verb. So this reply looks contrived.<sup>30</sup> 2) Take 'goat-stag' etc. to signify a concept in a presently existing mind: this is what is being named or is a phantasm. [Cf. Simplicius, in *De An.* 216,35-8] Ammonius may in fact need both answers: the first to handle 'Homer is a poet'; the second to handle 'Homer is a concept', which should be true according to this second reading, although this too conflicts with ordinary usage.

Whatever the merits of Ammonius' position, I submit that he has disagreed with Aristotle and has not given an accurate interpretation of Aristotle's theory of predication. Perhaps Ammonius has a Platonist motive. He does cite the *Sophist* often. [E.g., 184,30-1; 186,17; 212,33] To be sure, as I have held in Chapter Two, for Plato every denial normally asserts existence. But then Ammonius should proceed to embrace the aspect theory

<sup>30</sup> Ammonius 185,6-7 (quoted in Chapter Seven).

and not take 'is' to serve merely as copula, but instead to signify a participation in Being, as he himself sometimes asserts.

**Philoponus** What position Ammonius' student, Philoponus, holds on predication is difficult to determine. For he does not address the main issues directly in what texts we have. The main source is his commentary on *Prior Analytics* I.46.<sup>31</sup> It is difficult to extract his views on predication generally from it. However, there are some indications that he does favor the aspect theory despite being Ammonius' student.

Philoponus faithfully reproduces what Aristotle says there. The metathetic affirmation ('S is not-P') requires that the subject exist, while the simple denial ('S is not P') does not:

For he who says 'the log is not-white' says that there is some log and 'not-white' is predicated of it. But he who says 'the log is not white' can deny not only the white but also the log. For it is true to say that the soul of a not-being is not a white log. [*in An. Pr.* 370,3-10; cf. 372,6-20]

He assumes that the same interpretation holds in *On Interpretation* 10, although he is wary ("as Alexander says"). [371,5; 373,22-3; 22,14-5] Consistent with this view, he holds that the denial of a metathetic like the simple denial is true if the subject does not exist. [371,26-7; 372,6-11] Here Philoponus may be departing from Ammonius. For, at least at times, Ammonius appears to hold that Aristotle has different views of the metathetic statement in *On Interpretation* 10 and *Prior Analytics* I.46. In any case, in the text above, Philoponus clearly takes 'S is P' to have two truth conditions, S exists and P is predicated of S, and its denial to have the resulting disjunctive truth conditions: either S does not exist or P is not predicated of S. This suggests that Philoponus holds an aspect theory.<sup>32</sup>

How far Philoponus departs from his teacher Ammonius in his views is hard to say. Being a Christian, Philoponus did argue against Proclus on theological issues.<sup>33</sup> Yet Philoponus is supposed to be repeating what his teacher Ammonius had said in lecture. For, like him, Philoponus does say too that a proposition has two parts, the subject and predicate terms, and that 'is' serves merely to tie them together. [25,1-4; 26,24-6] Again, as we shall see, he recognizes with Ammonius two types of metathetic statements.

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<sup>31</sup> Daniel Blank, *Ammonius: On Aristotle's On Interpretation* 1-8, p. 2 makes the usual claim that Philoponus has only recorded Ammonius' lectures in his commentary. Perhaps, but then perhaps Philoponus has mixed in some of his own views.

<sup>32</sup> As noted in Chapter Seven, Philoponus, *in An. Pr.* 373,8-10, contrasts 'what is not without qualification (ἀπλῶς)' from 'what is not a log'. This suggests taking the 'log' as a qualification of being.

<sup>33</sup> He also argues against Iamblichus' analysis of the statement at 26,5.

However, unlike Ammonius, Philoponus denies that metathetic affirmation and the simple denial are equivalent, and again claims that *On Interpretation* and the *Prior Analytics* are consistent here. [374,15-21] Too he holds that 'is not P' but not 'is not-P' holds true for what does not exist.

...in the case of the non-existent...it is true to say that it is not white, but not that it is not-white: for how would what does not exist at all be not-white? [376,23-5; cf. 373,7-9]

Here Philoponus has departed from Ammonius' teaching, at least from those in *On Interpretation* 10. (Still Ammonius himself seems to acknowledge a different sense for indefinite propositions in the *Prior Analytics*.) For Ammonius requires the subject to exist. Philoponus is perhaps picking up on the "Stoic" view critiqued by Alexander. We shall see Avicenna following this aspect theory more clearly, while rejecting the views of Ammonius and his follower Al-Farabi.

**Boethius** Boethius performed the function of transmitting various pieces of the puzzles concerning Aristotle's doctrine of predication to the Latin West. His own views depend heavily on earlier sources, notably Porphyry.<sup>34</sup> Generally he argues against the views of Ammonius (Proclus) when different. Although the later medievals follow Ammonius more than they do Boethius, still Boethius did present the issues as well as some of Ammonius' views.<sup>35</sup>

Boethius views a statement of *tertium adiacens* to predicate the predicate ('P') of the subject ('S'), and to predicate 'is' only accidentally.<sup>36</sup> Like Ammonius, Boethius says that the statement has only two terms, 'S' and 'P', and that 'is' serves only to couple them. But then he too has the standard problem of the copulative interpretation, why the predication of an indefinite name, in a metathetic affirmation, requires that the subject exist, as he states.<sup>37</sup> Still he sticks with the copulative reading. He is aware of the

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<sup>34</sup> Sten Ebbesen, "Boethius as an Aristotelian Commentator," pp. 370-1; J. Shiel, "Boethius' Commentaries on Aristotle," pp. 356-61. Shiel suggests that Boethius may transmitted these doctrines of Ammonius solely by translating *marginalia*.

<sup>35</sup> M. Soreth, "Zum infiniten Prädikat in zehnten Kapitel der Aristotelischen Hermeneutik," pp. 393-5.

<sup>36</sup> *In Librum Aristotelis De Interpretatione Editio Secunda* 526A; 527C-D; cf. *In Librum Aristotelis De Interpretatione Editio Prima* 343C. Like Ammonius et al, Boethius holds that what exists *per accidens* refers to a presently existing phantasm in the mind. *Editio Secunda*, 578D-579D. Cf. John Magee, *Boethius on Signification and Mind*, pp. 113-5.

<sup>37</sup> Boethius also discusses the option of reading a statement of *tertium adiacens* as a predicative complex ('there is an S-P'), *Editio Secunda* 526A. He objects that then there would be two subjects.

aspect theory but rejects it.<sup>38</sup> One motive for doing so might concern his need to be able to make predications of God non-temporally, just as one Form is related to another.<sup>39</sup>

Although translating denials in a Latin equivalent of the curious word order used by Aristotle, Boethius in his commentary then changes the order to what is clearer and more usual in Latin, as the Greek commentators did in Greek; e.g., '*non est homo iustus*' becomes '*homo iustus non est*'. [541A-B] He also raises the old controversy about where to put the negation: Aristotle puts negation thus: '*homo non ambulat*'; Stoics in front, ('*non homo ambulat*') but that is ambiguous between the indefinite name and the negation. [523D] As Christopher Martin notes, Boethius is misrepresenting the Stoic views, and in any case is merely repeating an argument found in Ammonius and earlier in Alexander.<sup>40</sup>

Boethius says that indefinite names can be predicated truly of what exists and what does not, like man and chimera.<sup>41</sup> Likewise for the indefinite verb.<sup>42</sup> A statement is composed of a name or indefinite name, and a verb.<sup>43</sup> Boethius allows for an indefinite verb to appear in a statement but says that when it does so it amounts to a simple denial mostly because, it seems, the two look the same.<sup>44</sup> Thus '*non currit*', when predicated, becomes the denial of '*currit*' ('runs') and not the indefinite '*non-currit*' ('not-runs').<sup>45</sup>

Making the indefinite verb amount to a simple denial need not require that the subject have existential import, if we took the denial to be of the form 'not (S is P)'. However, Boethius gives existential import to denials too. He needs this for several claims that he makes (despite also stating in his commentaries claims made by Aristotle that conflict with these): 1) that the affirmative indefinite universal ('every S is not-P') is equivalent to the simple negative universal ('no S is P').<sup>46</sup> Aristotle has the inference holding only one-way; to get both we need existential import for the simple denial. 2) Just as the A statement implies the I, so too the E the O [542B; 543D-E]<sup>47</sup> The word order for an O statement in Aristotle need not imply existential import; e.g., "*non omnis est homo iustus*". [543D] But Boethius' new

<sup>38</sup> *Editio Secunda* 525B.

<sup>39</sup> *Editio Secunda* 418D-419B.

<sup>40</sup> Christopher J. Martin, "The Logic of Negation in Boethius," p. 284. Ammonius, in *De Int.* 87.

<sup>41</sup> *Editio Secunda* 424D; *Editio Prima* 303C-D.

<sup>42</sup> *Editio Prima* 308C-D; cf. *Editio Secunda*, 429B.

<sup>43</sup> *Editio Prima* 341C.

<sup>44</sup> *Editio Secunda* 522B; 523 C-D.

<sup>45</sup> *Editio Secunda* 551B-C.

<sup>46</sup> *Editio Secunda* 557A. Here he agrees with Ammonius, in *de Int.* 185,23-186,6.

<sup>47</sup> *Editio Secunda* 468D-469A; *Editio Prima* 320b.



order, e.g., “*quidam homo lapis non est*”, does. 3) Boethius identifies the metathetic with the privative. [344D-345A]<sup>48</sup>

At the same time, Boethius reaffirms Aristotle’s doctrine about inference patterns: of metathetic and simple statements. [533D] He says that the simple denial holds true of more than the metathetic. [533A] For a horse is not just but is not not-just. This works only because Boethius has identified the metathetic with the privative. Yet echoing Aristotle Boethius has said that the indefinite name describes what exists as well as what does not exist. Such claims will be giving later medieval commentators much material to explain. We have many unresolved problems. As a result we may recycle Martin’s remark, made in another context:

Boethius’ account of affirmation and negation is exactly the kind of theory which Frege criticized so unmercifully in his essay “Negation.”<sup>49</sup>

Indeed, Boethius has bequeathed his successors two legacies: the transmission of Greek philosophical doctrines and the task of making a coherent theory out of his remarks. I find Boethius’ commentary here repetitive and disorganized. Perhaps Boethius has merely been collecting others’ views.

**Abelard** In general Abelard begins by worrying about how to understand and explain what Boethius and Aristotle say.<sup>50</sup> Accepting what each of them says as authoritative, he then raises puzzles about how to understand their claims.<sup>51</sup>

As many have noted, Abelard tends to present more than one theory, or least versions of a theory, in the same work.<sup>52</sup> So it becomes difficult to say what Abelard believes, even at one time in a single work. But he appears to offer various versions of the copulative theory: first, an inherence theory, and, second, one of pure copulation (*officium copulationis*—appropriately enough for him!), where ‘is’ serves solely to link subject and predicate.<sup>53</sup> At the same time, he points out problems with the copulative theory, on either version. Many of Abelard’s puzzling examples become standard

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<sup>48</sup> So his counterexample is ‘horse’, *Editio Secunda* 532D; 534C-D. Also see 5533D-534A.

<sup>49</sup> Christopher J. Martin, “The Logic of Negation in Boethius,” p. 285.

<sup>50</sup> Martin Tweedale, *Abelard on Universals*, pp. 142-5, thinks that Abelard may have had some fairly direct Stoic influence. Cf. Daniel Blackwell, *Non-Ontological Constructs*.

<sup>51</sup> Klaus Jacobi, “Peter Abelard’s Investigations into the Meaning and Functions of the Speech Sign ‘Est’,” p. 145.

<sup>52</sup> Klaus Jacobi and Christian Strub, “Peter Abelard als Kommentar.”

<sup>53</sup> Cf. L. M. De Rijk, ed. & trans., *Dialectica*, p. xliii.

sophisms in the later medieval period, like ‘the chimera is a chimera’.<sup>54</sup> Working out these problems helped give rise to versions of the aspect theory in later medieval authors.<sup>55</sup>

Following Boethius, Abelard first presents a view where ‘S is P’ asserts that P-ness inheres in S.<sup>56</sup> ‘Socrates is a philosopher’ asserts that Socrates participates in philosophy, and ‘Socrates is white’ asserts that whiteness is in Socrates. Abelard claims that although the paronym (philosopher; white) is used, it is the item in the category (philosophy, whiteness) that is predicated.<sup>57</sup> The concrete form of terms signifying accidents prevents their being predicated themselves. In the tradition of Lycophron Abelard longs for a verbal form for all predicates. The predicate relation of the copula ‘is’ signifies only the inherence of the predicate, the accident, in the subject, and makes it possible by transforming the substantive form (‘P-ness’) into a verbalized, paronymous form (‘is P’). Three terms then come into play in the predication: e.g., ‘Socrates’, ‘white’, and ‘whiteness’. But only whiteness is predicated of Socrates.<sup>58</sup> The paronymous ‘white’ signifies no entity in its own right, just as we have seen with Aristotle.<sup>59</sup> However, at times, Abelard seems to reject the inherence theory because it concerns more than two terms. Both paronyms, white and whiteness, would have presence in a simple statement. Moreover, the inherence itself would seem to appear as yet another term along with subject and predicate, and to designate something real in its own right.<sup>60</sup>

By ‘inherence’ Abelard seems to mean not the mere connection of predicate to subject so much as the inhering of the predicate, ‘whiteness, in

<sup>54</sup> *Dialectica* 139, 26-142, 14. Cf. *Glossae super Peri Hermenias* 348, 37-351, 23. Martin Tweedale, *Abelard on Universals*, p. 291; Sten Ebbesen, “The Chimera’s Diary,” pp. 122-31.

<sup>55</sup> Martin Tweedale, *Abelard on Universals*, p. 227. Cf. *Dialectica*, 123, 15-25; 130-131

<sup>56</sup> *Glossae super Peri Hermenias*, 359, 4-5; 360, 27-34. Cf. Boethius, *Liber de Divisione*, 889A; *In Librum Aristotelis De Interpretatione Editio Secunda* 465A. Martin Tweedale, *Abelard on Universals*, p. 273.

<sup>57</sup> *Glossae super Peri Hermenias* 360, 27-34. Cf. *Glossae super Porphyriam*, 17, 12-28. On the historical precedents between the predication of the derivative and the substantive forms, see Ian Wilks, “Peter Abelard and the Metaphysics of Essential Predication,” p. 369 n. 4.

<sup>58</sup> John Marenbon, *The Philosophy of Peter Abelard*, pp. 138-9.

<sup>59</sup> *Glossae super Peri Hermenias* 360, 23-5. John Marenbon, *The Philosophy of Peter Abelard*, p. 142, accordingly claims that paronymy is more important to medieval logicians than to the ancient ones. I have argued above that modern scholars have underestimated the role of paronymy in Aristotle’s thought. Cf. *Glossae super Praedicamenta* 122, 29; *Dialectica* 65, 24-31. See too Klaus Jacobi, “Peter Abelard’s Investigations into the Meaning and Functions of the Speech Sign ‘Est’,” pp. 149-55; Martin Tweedale, *Abelard on Universals*, p. 6.

<sup>60</sup> *Dialectica* 158, 3-8; 131, 33-132, 7; Martin Tweedale, *Abelard on Universals*, pp. 273; 243; Hermann Weidemann, “Prädikation,” p. 1200.

the subject through its assuming its paronymous form 'white'. Inherence is that relation which transforms the substantive predicate into its paronym. But, if the proposition be constructed in this way, Abelard objects, it would then make several claims and not be simple.<sup>61</sup> Consequently, at times, Abelard proposes a pure copulation theory.<sup>62</sup> On it 'is' serves solely to link subject and predicate. It has no other office or function, like, say, transforming another item in a category into its paronym.<sup>63</sup> This holds only for statements of *tertium adiacens*. For those of *secundum adiacens*, 'is' serves the dual function of coupling subject and predicate and providing the predicate of existence. Abelard clearly states that in the statement of *tertium adiacens* the copula does not make an assertion of existence, nor does it make a non-substantial item inhere paronymously in the subject.<sup>64</sup> Abelard then wants to say that in a statement of *tertium adiacens* 'is' is predicated only *per accidens*. It performs only the logical, syncategorematic function of connecting predicate to subject. In effect, Abelard is taking 'is P' to form a single verbal expression: i.e., he is reducing all the tripartite forms into the bipartite forms, a reversal of the usual procedure.<sup>65</sup> In contrast, in a

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<sup>61</sup> *Dialectica* 158,23-4: "Quodsi cum inherentia et animal simul homini attribuitur, necesse est sic quoque propositionem esse multiplicem..."

<sup>62</sup> Here he is following Ammonius more than Boethius. Charles Kahn, "On the Terminology for Copula and Existence," p. 150. Ian Wilks, "Abelard and the Metaphysics of Essential Predication," pp. 368-9, says that Abelard does not have two separate theories but different elaborations of the same theory.

<sup>63</sup> Cf. *Glossae super Peri Hermenias* 361,30-6; 360,2-22; 390,11-393,37; Klaus Jacobi, "Diskussion über unpersönlichen Aussagen in Peter Abelards Kommentar zu Peri Hermenias;" Martin Tweedale, *Abelard on Universals*, pp. 153; 159; 243; 339., notes that Abelard complains that the inherence theory cannot handle true denials.

Following Boethius, *De Syllogismo Hypothetico* 837C, Abelard recognizes other verbs besides 'est' as being copulative: the so-called nuncupative verbs. *Glossae super Peri Hermenias* 362,37-40.

<sup>64</sup> *Glossae super Peri Hermenias* 361,37-362,8. Perhaps Abelard's extended treatment of impersonal verbs using Aristotle's theory of the statement led him not to require existential import for statements in general. Cf. Klaus Jacobi, "Diskussion über unpersönliche Aussagen in Peter Abaelards Kommentar zu Peri Hermenias;" Daniel Blackwell, *Non-Ontological Constructs*, pp. 83; 86 n.5.

<sup>65</sup> *Dialectica* 122,22-123,5, Klaus Jacobi, "Peter Abelard's Investigations into the Meaning and Functions of the Speech Sign 'Est'," pp. 156; 163; Hermann Weidemann, "Prädikation," pp. 1200-1.

Martin Tweedale, *Abelard on Universals*, p. 289, claims that for Abelard "...nouns are implicit verb phrases and thus possess tense..." He notes, p. 291, that Abelard need only say, "A predicate noun or adjective cannot retain in conjunction with the copula the meaning it has in isolation." Tweedale claims too, pp. 284-5, that Abelard was the first to have a bipartite theory of predication. He admits that Plato and Aristotle both presented such a view but thinks that they held it to be misleading logically. Above I have argued that Tweedale is mistaken about Plato and Aristotle.

statement of *secundum adiacens*, 'is' both connects predicate to subject and provides a predicate of existence, and so is predicated *per se*.<sup>66</sup>

Abelard gives 'Homer is a poet' as an example of 'is' *per accidens*, having only "*copulationis officium*".<sup>67</sup> By denying that 'is' is "additionally predicated" in a statement of *tertium adiacens*, he has prevented the inference from accepting the truth of 'Homer is a poet' and 'a chimera is a chimera' to asserting the present existence of Homer or of a chimera. Yet, he recognizes, he has the problem of not allowing for the inference that Peter is from 'Peter is a man'. In accordance with his purely copulative theory, he says that the validity of that inference might be due more to the predication of 'man' than to the presence of 'is'.<sup>68</sup> He does not want to sanction that inference for all statements of *tertium adiacens* also because then he would have to make the same for statements with 'Homer' or 'chimera' as subject.

Abelard clearly is having qualms about the consistency of his Aristotelian legacy. For Abelard, in general, "verbs...connote actions. They do not simply combine subject things with predicate qualities."<sup>69</sup> But then Abelard has to make 'be' an exception. Further, if 'is' serves only as a pure copula, then what are we to make of statements like 'a chimera is a chimera' and 'a chimera is a not-man'? For if these statements assert only that the indefinite name, 'not-man', and 'chimera' are predicates of a chimera, and make no existence claim, they appear true.<sup>70</sup> Abelard might accept them as true, and deny the inference to *secundum adiacens*. But Aristotle has said that the metathetic 'S is not-P', like affirmations in general, holds true only for

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<sup>66</sup> *Dialectica* 134,28-135,11. Jean Jolivet, *Arts du langage et théologie chez Abélard*, p. 57, n. 217, notes that Abelard has the verb play a double function but sees no contradiction in the case of 'be'; cf. n. 224.

<sup>67</sup> *Dialectica* 135,11-7.

<sup>68</sup> *Dialectica* 139,2-26; cf. 168,3-10. However De Rijk, pp. xlv-xlvi, then thinks that for Abelard 'is' in *tertium adiacens* does make an assertion of existence on account of its con-signifying time. Cf. *Glossae super Peri Hermenias* 362,32-4; 346,25-9; 354,1-3. Abelard might have to admit this, but would then have to give up his pure copulation theory. Abelard has a rather complex theory on the *secundum quid ad simpliciter* inference, as he considers it to hold for intransitive but not always for transitive verbs. Cf. *Dialectica* 135,18-28; Martin Tweedale, *Abelard on Universals*, pp. 195-6; 293-4.

<sup>69</sup> Daniel Blackwell, *Non-Ontological Constructs*, p. 97; cf. p. 104.

<sup>70</sup> *Glossae super Peri Hermenias* 361,12-4. Cf. *Dialectica* 176,20-4, where Abelard says that 'omnis homo est homo' is false if no human beings exist; *Super Topica Glossae* 226,3-5, where he says that 'non-homo' agrees with existents as much as to non-existents. Martin Tweedale, "Abelard and Non-Things," p. 336, agrees that in '*chimera est chimera*' Abelard does not require the chimera to exist, but says that he does not explain why.

what exists. So how can Abelard maintain a purely copulative theory and still support Aristotle's position?<sup>71</sup>

Abelard ends up taking Boethius' way out: redescribe what is being asserted on a rather arbitrary, *ad hoc* basis: 'Homer is a poet' asserts that Homer's poetry presently exists; 'a chimera is a chimera' and 'a chimera is a not-man' assert that the predicates given are its names, while the chimera exists presently as a phantasm in someone's mind.<sup>72</sup> In these problematic, "nuncupative" cases, 'is' no longer performs the function of copulation but of naming or describing present psychological states.<sup>73</sup> But Abelard has doubts about this copulative theory. For the solutions, inherited from Boethius, look contrived. Abelard also offers another solution: take 'is a chimera' to form a verb ("chimerizes") and then grant the truth of 'a chimera is a chimera', with no existential import.<sup>74</sup>

Abelard has yet further worries about the consequences of taking 'is' purely copulatively.<sup>75</sup> For 'is' also consignifies the present time, just as 'was' does past time. But then 'is' appears to make a predication claim even in a statement of *tertium adiacens*. We have seen that he solves this problem sometimes through taking 'is' with the predicate complement to constitute a single verb, which has the tense. In order to allow for the conversion of premises, Abelard then has to take both names and verbs concretely: 'S is P' is to be read as 'that which is S is that which is P', although somehow the predicate still retains its verbal character.<sup>76</sup> Above I have argued that Aristotle too takes subject and predicate concretely in conversion.

At most, Abelard requires existential import only for the affirmative forms. The truth of the negative forms holds even when the subject does not exist.<sup>77</sup> Like Albert and Scotus later, Abelard wants to make the truth of the proposition depend primarily on the relation of concepts and not one of things. However, other times, as with 'the chimera is a chimera', Abelard requires existential import for affirmations. If he put together these two points, he would then be approaching an explicit statement of having dis-

<sup>71</sup> *Glossae super Peri Hermenias* 362,20-5.

<sup>72</sup> *Dialectica* 136,2-6; 136,32-7; 137,26-36. Martin Tweedale, *Abelard on Universals*, pp. 293-7.

<sup>73</sup> *Glossae super Peri Hermenias* 361,19-22. At one point, 371, 15, Abelard says that statements about the chimera are meaningless since 'chimera' does not exist even *in intellectu*. Cf. Daniel Blackwell, *Non-Ontological Constructs*, pp. 135-6.

<sup>74</sup> *Dialectica* 138,11-25. I. Dapunt, "Zwei Typen von Systemen der traditionellen Logik," p. 279, claims that Bolzano differs from traditional logic in rejecting the axiom, 'some A is A', but this sophism shows otherwise.

<sup>75</sup> *Glossae super Peri Hermenias* 452,2-9.

<sup>76</sup> *Dialectica* 139,12-22; Martin Tweedale, *Abelard on Universals*, pp. 298; 302.

<sup>77</sup> *Glossae super Peri Hermenias* 366,26-32.

junctive truth conditions for the negative forms: ‘not (S is P)’ iff either S does not exist or P is not predicated of S. As we have seen, even for the negative forms he hesitates. Despite himself and his legacy, he is moving towards an aspect theory.

**Al-Farabi** Following Ammonius mostly, Al-Farabi has a view of predication that accords with the copula theory of predication in Aristotle. He glosses over statements of *secundum adiacens*, although he does admit their use in discussing ‘Homer is a poet’.<sup>78</sup> Al-Farabi holds that, although ‘is’ in ‘S is’ makes an existence claim, ‘is’ in ‘S is P’ merely indicates the relation of predication, between subject and predicate.<sup>79</sup> Commenting on *On Interpretation* 19b19-20, where Aristotle considers sentences of the form, ‘S is P’, and where, he says, the copula ‘is’ (*mawjūd* in Arabic) is “predicated in addition” (*προσκατηγορούμενον*), Al-Farabi says:

The hyparcctic verb (sc., the copula) is not itself predicated, and not principally intended to be predicated, but is predicated only for the sake of something else.<sup>80</sup>

Thus, like Ammonius, Al-Farabi seems to be taking *προσκατηγορούμενον* to mean ‘incidentally predicated’, as opposed to ‘additionally predicated’. E.g., in ‘Socrates is just’, ‘is’ is not additionally predicated, by itself, of Socrates. Thus it need not follow from ‘Socrates is just’ that Socrates is (existent). ‘Is’ serves solely to tie subject and predicate.

As discussed in Chapter One, the logicians writing in Arabic had to make up words and syntax to present Aristotle’s theory. To say that S is or exists (ἔστιν S) was rendered either by the verbal *kāna* construction, as *‘kāna al-S mawjūd*’ or nominally by *‘al-S mawjūd*’. ‘P’ in ‘S is P’ is then put into an accusative of respect, that specifies the existence further. Hence we have the usual parsing of the aspect theory: S is existent as a P. In this tradition, Al-Farabi et al. had to develop an artificial Arabic in order to preserve Aristotle’s theory. Note that in doing so Al-Farabi hardly becomes a victim of linguistic illusion. For the usual way to read *‘mawjūd*’ makes

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<sup>78</sup> *Al-Farabi’s Commentary on Aristotle’s Peri Hermenias*, 160,23-161,2 [trans. F. W. Zimmermann, p. 155]. Like Ammonius, Al-Farabi, 162,9-16 [pp. 156-7] takes being *per accidens* to refer to something actually existing in a present mind. However Nicholas Rescher, “Al-Farabi: Is Existence a Predicate?,” p. 40, cites a text in which Al-Farabi denies that ‘S is’ makes a “real” statement of existence.

<sup>79</sup> Shukri Ahed, *Aristotelian Logic and the Arabic Language in Alfarabi*, pp. 125-6.

<sup>80</sup> *Al-Farabi’s Commentary on Aristotle’s Peri Hermenias*, 105,15-6 [trans. F. W. Zimmermann, p. 101]. Indeed, Zimmermann, anxious to stress that the copula in a tripartite sentence is not used existentially for Al-Farabi, uses ‘hyparcctic’ instead of ‘existential’ to translate *‘mawjūd*’; see pp. xlv; lx n. 1. Cf. *Kitāb al-Hurūf* §101, 125,12-126,14.

every statement of *tertium adiacens* make an existence claim: But Al-Farabi goes against this usage.

The extent to which al-Farabi was prepared to interfere with the grammar of Arabic is illustrated by his treatment of the copula...[The example] can be construed as meaning ‘Zayd is found just’ or, at best, ‘Zayd exists as a just one’. In this case as in others, al-Farabi’s artificialities are neither felicitous nor at all warranted...but it cannot be said that he did not know what he was doing.<sup>81</sup>

Al-Farabi is aware of the theory that the presence of ‘is’ makes a predication of existence.<sup>82</sup> But he prefers to stick to the copulative interpretation.<sup>83</sup> However, since ‘is’ itself makes no predication, Al-Farabi accordingly denies that a statement of *secundum adiacens* is well-formed—unless it has an implicit predicate, like ‘there’ or ‘existent’, and so becomes a statement of *tertium adiacens*.<sup>84</sup> He does not say that the presence of ‘*mawjūd*’ in a tripartite sentence, that is, one of form, ‘S is P’, requires there to be an existence claim. For he does not give a statement about the existence of subject or predicate as a truth condition for any form of categorical proposition.<sup>85</sup> In sum, Al-Farabi has the copulative theory.

**Avicenna (Ibn Sina)** As I have noted in Chapter One, Avicenna presents an aspect theory of predication clearly.<sup>86</sup> To be sure, at times, Avicenna appears to agree with, if not repeat, the view of predication, given by Al-Farabi.<sup>87</sup> Yet, strangely, after giving an account of predication in line with the doctrine of Al-Farabi, Avicenna at times has discussions at odds with this account. These discrepancies need not point to inconsistencies in Avicenna’s works. As is often remarked, Avicenna himself states that in his encyclopedic works (the *Shifā’* and related summaries) he is merely

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<sup>81</sup> F. W. Zimmermann, *Al-Farabi’s Commentary and Short Treatise on Aristotle’s De Interpretatione*, pp. xliv-v; cf. p. 98 n. 2.

<sup>82</sup> *Kitāb al-Hurūf* §102, 126,15-127,11. The view that he cites has some peculiar features, e.g., that ‘man is [existent as an] animal’ is false, since some animals are dogs.

<sup>83</sup> M. Mahdi has suggested to me that in the *Kitāb al-Hurūf* Al-Farabi has moved more to viewing predication as an assertion of existence. Cf. §99, 119,5-120.6. Still he does revert to the copulative interpretation in the next sections.

<sup>84</sup> *Kitāb al-Hurūf* 46,13-47,2; 48,8-11, §§8-10.

<sup>85</sup> Fuad Said Hsadda, *Alfarabi’s Theory of Communication*, p. 80, has Al-Farabi give existential import to all universal negative statements.

<sup>86</sup> For a fuller account of Avicenna’s views, see Allan Bäck, “Avicenna on Being.”

<sup>87</sup> *Al-‘Ibāra* 77,4 & 12-3. Avicenna, *Al-Qīyās* 21,13ff; *Kitāb al-Najāt* 13; 15,13ff.; *Man-ṭiq al-Mashrīqīyyīn* 24. Cf. Nicholas Rescher, “The Concept of Existence in Arabic Logic,” pp. 69-80.

giving the doctrine of the “Westerners”, that is, of the Aristotelians.<sup>88</sup> In his *Logic of the Orientals*, Avicenna proposed to be more original.

Accordingly, in presenting tables of opposites for simple categorical propositions, Avicenna at times presents a view of predication different from the one offered by Al-Farabi. He gives more truth conditions than Al-Farabi does for propositions in those tables. As noted, Avicenna does not require existential import for E and O propositions. However he does require it for them in the syllogistic because in those scientific contexts ‘no S is P’ is to be read as ‘no thing that is S is P’.<sup>89</sup> Avicenna states that his basic principle is: “the reality of the affirmation is the judgment of the presence (*wujud*) of one thing to another.”<sup>90</sup> Thus far, Avicenna might to be following Al-Farabi and *On Interpretation*, as commonly interpreted. So too Avicenna insists that a statement concerns the relation of one thought to another.<sup>91</sup> Thus, he says, every subject of a proposition, even ‘griffin’, is existent either in individuals or in the intellect.<sup>92</sup>

However, Avicenna has a stronger notion of existence. He insists that a predicative proposition makes a statement of existence explicitly.<sup>93</sup> The metathetic affirmation is restricted to what exists not because of the subject term but because the nature of an affirmation requires that.<sup>94</sup> So every affirmation has the additional predication of existence, over and above its principal predication (of ‘P’).

Although Avicenna does admit contexts where existence *in intellectu* suffices, he generally demands existence *in re*.<sup>95</sup> In commenting on *On Interpretation* 11, at first Avicenna follows Al-Farabi once again in explaining why ‘Homer is’ does not follow from ‘Homer is a poet’. In ‘Homer is a poet’, the copula is predicated only incidentally, to signify the predication

<sup>88</sup> Majid Fakhry, *A History of Islamic Philosophy*, pp. 152-3.

<sup>89</sup> *Al-Qīyās* 36,10-37,15. He notes that Aristotle also did this in calling E and O statements “privative”.

<sup>90</sup> Avicenna, *Al-‘Ibāra* 82,15ff; *Kitāb al-Najāt* 67,11-8; *On Interpretation* 19b5. Cf. Al-Farabi’s *Commentary* 103,3-23 [trans. Zimmermann, pp. 98-9].

<sup>91</sup> *Al-‘Ibāra* 42,15-6.

<sup>92</sup> *Al-‘Ibāra* 82,15ff. Cf. *Al-Maḡūlāt* 22,9-10.

<sup>93</sup> *Al-‘Ibāra* 34,7-9. However, at *Al-Qīyās* 485,13-4, Avicenna says that the copula in itself is neither true nor false but needs a complement; perhaps he is thinking that ‘*mawjūd*’ must be supplied.

<sup>94</sup> *Al-‘Ibāra* 182,10-3.

<sup>95</sup> Miklos Maroth, *Ibn Sina und die Peripatetische “Aussagenlogik”*, pp. 39; 42, notes that like the Stoics, Avicenna lets conditionals apply to non-existents as well as to existents, in contrast to the categoricals.



of 'poet' of Homer; 'is' is not predicated in its own right.<sup>96</sup> I.e., this sentence has a predication of being *per accidens*. For him these too end up having an existing subject, but this time an actual concept in a presently existing mind.<sup>97</sup> Strictly speaking, 'Homer is a poet' is false, since Homer does not exist *in re*.

In short, then, Avicenna has an aspect theory of predication. The affirmation asserts existence, generally *in re*; even when there is an additional predicate, both it and existence become predicates: S is P iff S is, and 'P' is predicated of 'S'. Read literally, the '*mawjūd*' construction by itself would suggest this theory. In addition, Avicenna may be following Philoponus, whom he also follows in his theory of space.<sup>98</sup> Of course, perhaps too, Avicenna has just understood Aristotle correctly...as my interpretation suggests.<sup>99</sup>

**Averroes (Ibn Rushd)** Averroes presents clearly the copulative theory of predication. His main importance lies in his being a major source for later theories of predication, especially those of Albert the Great and Aquinas who follow him. For him 'is' serves as "a relation conjoining subject with the predicate."<sup>100</sup>

Averroes largely agrees here with the tradition of Boethius. (Although Averroes worked independently of Boethius, they had common sources, notably Alexander and Ammonius.) The medievals thus inherited in the new logic an authoritative but simple version of the copulative theory as an interpretation of Aristotle's theory of predication from multiple sources.

**Albert the Great** We may view Albert here as a transitional figure. For he transmits much of what was available of Avicenna and Averroes in Latin to such in the Latin West as his student, Thomas Aquinas. Despite adhering to Avicenna in his metaphysics, Albert usually follows Averroes

<sup>96</sup> *Al-'Ibāra* 109,2-11. Cf. *On Interpretation* 21a25-8, and Al-Farabi's *Commentary* 160,23-7 [trans. Zimmermann, p. 155]. Also cf. Ammonius, in *De Int.* 186,15.

<sup>97</sup> *Al-'Ibāra* 109,12-110,1. Cf. Avicenna's discussion of the griffin, 110,2ff & 82,16-8; *Kitāb al-Najāt* 6,2-3. On the relation between phantasms and concepts, cf. *Fī Al-Nafs* 32,7ff.; 147,1ff. In general, 110,7-14, phantasms are based on particular experience, whereas concepts are of universals. On predication of non-existent objects, cf. Ammonius, in *De Int.* 186,15.

<sup>98</sup> See Allan Bäck, "Ibn Sina on the Individuation of Perceptible Substances," nn. 38-9.

<sup>99</sup> Avicenna, *Al-Madkhal* 57,7; *Al-Jadal* 153,8-15; 173,3-5, also distinguishes sharply between the concrete and abstract terms, and insists that items in a category are signified by the abstract term, except for substances.

<sup>100</sup> Averroes, *Ṭalkīs Kitāb al 'Ibarāh* 64,8-9 [= *Commentarium in Librum de Interpretatione* 71D]. Nicholas Rescher, "Existence in Arabic Logic and Philosophy," pp. 73-5, agrees with me that Avicenna holds that 'S is P' requires that there really be an S, whereas Averroes holds that 'S is P' requires only that there be an S, *in re* or *in intellectu*.

and Ammonius in his predication theory—perhaps because he had little access to Avicenna's logical writings.

Albert basically has the copulative theory.<sup>101</sup> Still, despite his appeals to the authorities, he does present some new doctrines. Perhaps these do follow from what, e.g., Boethius, Abelard, Ammonius, and Averroes have said. But Albert is reporting what he—or someone else perhaps—has come up with in working out details of a copulative theory of predication.<sup>102</sup> For instance, he complicates the doctrine by distinguishing between a substantial and an adjectival reading of an indefinite name.<sup>103</sup> Again, in discussing *On Interpretation* 16a18, Albert explains the difference between a statement's being said simply or in time.<sup>104</sup> Like Boethius, Albert says that when a statement holds simply it holds always through itself, and does not require the existence of its subject. So 'man is animal' is true whether or not any human beings exist. If a statement is said temporally, then the subject is asserted to exist at the time indicated by the tense of the verb. Such a doctrine looks consistent with a copulative theory: the copula solely serves to link up subject and predicate, while consignifying time. When no time is specified, the statement merely concerns the relation of subject and predicate. Still this view will have a hard time explaining other Aristotelian doctrines, such as the claim that the metathetic affirmation requires the existence of its subject. For Albert holds too that the simple denial and the metathetic affirmation are equivalent (*aequipollenti*).<sup>105</sup> Scotus will work on these problems a lot.<sup>106</sup>

**Aquinas** Aquinas has importance not so much because of his contributions to the logical theory of predication, but because of the dominance of his views in interpretations of Aristotle's logical theory today. Generally he follows Boethius. Aquinas does not do much to resolve the problems that Boethius has bequeathed to his successors. Because of the dominance of

<sup>101</sup> *Perihermenias* 428a.

<sup>102</sup> Sten Ebbesen, "Albert (the Great's?) Companion to the Organon," claims that Albert basically follows Robert Kilwardby. In this distinction, he may be following the doctrine of Boethius discussed above. See L. M. de Rijk, "Die Wirkung der neuplatonischen Semantik," p. 29.

<sup>103</sup> *Perihermenias* 393a.

<sup>104</sup> *Perihermenias* 383b. Albert claims to follow Alexander, Boethius, and Avicenna. Certainly not Avicenna; as for Alexander, perhaps Albert is misconstruing in *Top.* 46,22-9. Boethius, *In Librum Aristotelis De Interpretatione Editio Prima* 301B, explains the distinction differently too.

<sup>105</sup> *Perihermenias* 430 col. 1; cf. 433 col. 2.

<sup>106</sup> *Duos libros Perihermenias... Quaestiones Octo* 216b; *In Secundum Librum Perihermenias Quaestiones* 204b. Cf. E. P. Bos, "The Theory of the Proposition According to John Duns Scotus."

Thomism, Aristotelian logic has gained a reputation for more incoherence than it deserves to have.

Aquinas has the usual account of indefinite names and verbs:

For it is imposed from the negation of man which is said equally of being and not-being. Whence too not-man can be said indifferently both of what is not in the nature of things, as if we said, 'a chimera is not-man', and of that which is in the nature of things, as if it is said, 'a horse is not-man'. Moreover, if it be imposed from a privation, the subject would at least be required to exist; but since it is imposed from the negation, it can be said both of being and not-being, as Boethius and Ammonius say.<sup>107</sup>

So Aquinas takes an indefinite name, 'not-S', to describe whatever is not P, i.e., to describe the complement of P. He holds that 'not-man' is said of things that do not exist, like chimeras, as well as of some things, like horses, that do exist. Aquinas says that 'a chimera is not-man' is true. So here he seems to say that the truth of the metathetic affirmation does not require its subject to exist.

Aquinas takes statements of *secundum adiacens* to make assertions of real existence. But with those of *tertium adiacens*, where 'is' is additionally predicated in addition as a third thing, Aquinas takes 'additionally predicated' to mean not that 'is' is also predicated of the subject, but that 'is' is attached to the predicate complement which is predicated of the subject:

...it must be considered that whenever 'is' is predicated in the assertion as something second, as when it is said, 'Socrates is': by this we intend to signify nothing other than that Socrates is in the nature of things. But whenever it is not predicated *per se*, as if it were a principal predicate, but as if conjoined to the principal predicate for connecting it to the subject, as when it is said, Socrates is white, the intention of the speaker is not to assert that Socrates in the nature of things, but to attribute whiteness to it by means of the verb 'is', and so in such 'is' is predicated as adjacent to the principal predicate. And it is not said to be third since it is a third predicate, but since it is a third expression put in the assertion, which, together with the predicated name, makes one predicate.<sup>108</sup>

Here Aquinas makes 'is' have only the copulative function in a statement of *tertium adiacens*, whereas 'is' has only the existential function in a statement of *secundum adiacens*. So Aquinas has a copulative theory of predication. In presenting it, he distinguishes sharply the 'is' of existence and

<sup>107</sup> Aquinas, *In Aristotelis Perihermenias Commentarium* I.4.13; my translation [trans. Oesterle, p. 41]; cf. S. T. I.17.4. See Allan Bäck, "Aquinas on Predication."

<sup>108</sup> Aquinas, *In Aristotelis Perihermenias Commentarium* II.2.2. Cf. S. T. I.3.4.ad 2; *De Ente et Essentia* 29,13-6.

the 'is' of predication: 'is' is ambiguous.<sup>109</sup> So too in general, to say that S is P amounts to asserting that there exists something that is both S and P.<sup>110</sup>

To be sure, this move may be an advance in logical theory.<sup>111</sup> But it has its problems as an interpretation of Aristotle's texts or as a doctrine to be embraced along with other of Aristotle's doctrines. For by denying that 'is' expresses an existence claim in a statement of *tertium adiacens*, Aquinas has landed into serious trouble. What he proceeds to say about statements of *tertium adiacens* with a metathetic predicate contradicts, frequently, what he has said about indefinite names and verbs.

So let us turn to Aquinas' account of metathetic affirmation. He clearly is aware of the difficulties of *On Interpretation* 10, as he cites the differing interpretations raised by Boethius. Giving his own view, he says:

...the statement, 'man is just', for example, is related to all those of which in any way 'is a just man' can be truly said. And similarly, the statement, 'man is not just', is related to all those, any of which it can be truly said that it is not a just man. According to this mode of speaking it is therefore evident that the simple negative holds in more cases than the infinite affirmative that corresponds to it. Thus that he be a not-just man can truly be said only of any man who does not have the habit of justice, but that he not be a just man can be said not only of a man not having the habit of justice, but also of what is not a man at all. For example, this is true: 'the log is not a just man', but still this is false: 'the log is a not-just man'. And so the simple negative holds in more cases than the indefinite affirmative, just as animal holds in more cases than man, since it is verified of more.<sup>112</sup>

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<sup>109</sup> *Quodl.* XII, 1 ad 1: "Esse dupliciter dicitur: quandoque enim esse idem est quod actus entis; quandoque autem significat compositionem enuntiationis; et sic significat actum intellectus..." Cf. *In I Sent.* 19.5.1 ad 1; *In III Sent.* 5; 7.1.1; *S. T.* I.39.6 ad 2; I.39.5 ad 4; *De pot.* q7.a2.ad 2.

Russell Pannier and Thomas Sullivan, "Aquinas on 'Exists'," pp. 159-60, understand Aquinas to say at *Metaphysicorum Aristotelis Expositio* V.1.ix n. 895, that something has being as truth "only if it can be made the intended subject of at least one statement, whether it be affirmative or negative." But, judging by the examples of *Metaphysics* V.7, the "statement" needs only being *per accidens*. Even they hedge on their example, 'the pink rabbit on the corner does not exist', and claim that the pink rabbit is not the logical subject.

<sup>110</sup> Hermann Weidemann, "'Socrates est': Zur Logik singularen Existenzaussagen nach Thomas von Aquin," pp. 753-6, takes the two senses as being in act and being the value of an existential quantifier respectively. The latter amounts to being *per accidens*: e.g., to say that blindness is *per accidens* amounts to asserting that there exists someone who is blind. Cf. Anthony Kenny, *The Five Ways*, p. 82; also G. E. M. Anscombe and Peter Geach, *Three Philosophers*, pp. 90-1. Russell Pannier and Thomas Sullivan, "Aquinas on 'Exists'," pp. 157; 163, attack Weidemann and Geach on the grounds that their Frege-style exemplification cannot handle singular statements with say 'Socrates' as subject—but clearly it can (by defining 'E!a' as '( $\exists x$ ) (x = a)').

<sup>111</sup> Ignacio Angelelli, *Studies on Gottlob Frege*, pp. 52-3.

<sup>112</sup> Aquinas, *In Aristotelis Perihermenias Commentarium* II.2.9.

Like Ammonius and Boethius, Aquinas turns the examples given as statements by Aristotle into predicates; e.g., ‘man is just’ becomes the predicate ‘is a just man’; the metathetic ‘man is not-just’ becomes ‘is a not-just man’. Aquinas then considers of what things such predicates are true. He says that the simple denial, ‘is not a just man’ is true of anything that is not a man and of any man that is not just. In contrast, the metathetic affirmation, ‘is a not-just man’ is true only of those men that are not just.

Aquinas is reading the categorical statement as having the form ‘\_\_\_ is S-P’, and then considers what subjects this predication holds true.<sup>113</sup> So ‘he is taking ‘S is P’ to make a complex predication of an unnamed subject. E.g., ‘[S] is a just man’ asserts both that S is just and that S is a man. Thus, the metathetic affirmation, ‘S is a not-just man’, asserts that S is not-just and that S is a man. So it will hold only of those existent humans that are not-just, i.e., that are not just for whatever reason. For civilized, normal human beings, being not-just amounts to the privative ‘unjust’, but not so for boys or barbarians, who are not in act in the moral sphere. However, the simple denial, ‘S is not a just man’ asserts that S is not both just and a man; i.e., that either S is not just or S is not a man. So the simple denial will hold of what does not exist at all, like goat-stag, of what exists but is not a man, like frogs, and of what exists as a man but is not just. Thus the metathetic affirmation has existential import for its subject, whereas the simple denial does not. But note that the reason for this lies in there being a complex predicate: it is because ‘man’ is predicated of the subject, not because ‘not-just’ is predicated of the subject, that the subject must exist for this metathetic affirmation to be true.<sup>114</sup>

In this way then Aquinas is able to maintain both that indefinite names and verbs may be said of the existent as well as of the non-existent while holding that the metathetic affirmation holds only for existent subjects.<sup>115</sup> But he accomplishes this at the cost of limiting what Aristotle is saying to

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<sup>113</sup> Boethius, *Editio Secunda* 531C-540A.

<sup>114</sup> Gyula Klima, “The Semantic Principles Underlying Saint Thomas Aquinas’s Metaphysics of Being,” p. 124, takes this account to give Aquinas an aspect theory of predication: “Just as in ‘ordinary predications’ we can attach various qualifications to the predicate, so these ‘ordinary predications’ themselves may be regarded as various qualifications of the predications of being. According to this analysis, therefore, when we say, ‘man is blind’, this is equivalent to saying, ‘A man’s blindness is’ which in turn, is equivalent to saying, ‘A man is with respect to his blindness’.” Cf. *Sentences* II.34.1.1.

<sup>115</sup> Aquinas never makes it too clear whether he thinks that the simple denial has existential import; after all his commentary breaks off in the middle of Chapter 10, and Cajetan continues. Yet above I have claimed that Boethius requires existential import for denials as well. This is the usual view taken by the Thomist tradition. Cf. Herbert McCabe, “Categories,” pp. 80-3.

existent subjects. For it is the subject term in the original statement that gives existential import. To see this, let us convert Aquinas' metathetic predicate, 'is a not-just man', back into the original statement, 'man is not-just'. Here the predication of 'not-just' does not make any existence claim by itself. At best, the presence of 'man' grounds the requirement of existence. Again consider 'a goat-stag is not-just'. It is true, given that 'is' has merely a copulative function, but makes no existence claim. Likewise, the complex predicate, 'is a not-just goat-stag', should not belong only to existent subjects.

Aquinas' claim that in a statement of *tertium adiacens* the copula 'is' makes no existence claim should entail for him that a metathetic affirmation by itself has no condition of existential import. For a metathetic affirmation is a statement of *tertium adiacens*. To repeat, the only way I can see for Aquinas to dredge an assertion of existence out of 'man is not-just' is to appeal to the content of the subject term, e.g., 'man'. For the predicate is an indefinite name, and Aquinas holds that an indefinite name like 'not-just' may be said indifferently of what does and of what does not exist. He has said that 'a chimera is non-existent' is true, and also linked indefinite verbs with simple negations and not with privative predicates. Further, as Aquinas holds that the copula 'is' in a statement of *tertium adiacens* serves only to link subject and predicate, he has eliminated the option of its making the existence claim. Nor does Aquinas give any indication how the "verb" in a statement of *tertium adiacens* will additionally signify time, and so perhaps provide a sentential context that might produce an existence claim. In short, Aquinas' theory does not support Aristotle's text nor his own claim that a metathetic affirmation applies only to what exists, and is not equivalent to a simple denial. So Aquinas has not managed to show that a metathetic affirmation requires that its subject exist. At best he can appeal only to the material content of the subject term ('man'), and not on the formal structure of a metathetic affirmation.<sup>116</sup> But this will hardly do in formal logic.<sup>117</sup> Having a subject in a category of being *per se* might be required to

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<sup>116</sup> Hermann Weidemann, "The Logic of Being in Thomas Aquinas," pp. 189-91.

<sup>117</sup> Perhaps Aquinas means his interpretation as a type of exposition (*ekthesis*), as used in the syllogistic. We are to take the indefinite proposition, 'man is not-just', and then consider what objects could make it true or false. As neither a horse (Boethius' example) nor something non-existent is a not-just man, the metathetic affirmation cannot be true of the non-existent. But, again, the trouble is that the subject term is 'man', and the restriction to the existent follows only from the content of the subject term.

Albert Zimmermann, "Eine anonyme *Quaestio: Utrum haec sit vera: Homo est animal homine non existente*," presents a later view following Aquinas: a term like 'man' must refer to a universal abstracted from individuals *in re*, and hence the statement is not true, p. 186,55-8. So the existence of the subject is presupposed, p. 197. If no man exists, 'man is animal' is true means only that the concept man is the concept animal, p. 190.

make an existence claim true, but it is not required for making an existence claim.

It is well known that Aquinas stopped writing this commentary in the midst of chapter 10 of *On Interpretation*. The usual reason given is that he was busy and that the student, for whom he was writing the commentary, wished to digest what he had been given before presuming to ask for more. Perhaps, on the other hand, Aquinas realized the mess that he had inherited and was trying to support. So perhaps not only St. Thomas's approaching beatitude but also his philosophical rectitude prevented him from continuing...<sup>118</sup>

The probable source for these views of Aquinas is Boethius' commentary on *On Interpretation*, or some commentary upon it.<sup>119</sup> I find it odd that Aquinas did not use the more modern sources available to him: Albert or Averroes. Perhaps he forsook his more usual modern sources because, after all, he was writing merely a commentary for a beginning student. But then we should not take this commentary too seriously in logical theory.<sup>120</sup>

Perhaps Aquinas, although citing Aristotle's views, is moving away from them. For, in his commentary on *Metaphysics* V.7, he seems to offer a different version. He sees the main point of the chapter to offer a distinction between two modes of being, the actual being (*actus essendi*) of real existence, and the alethic being of what is asserted, which he characterizes as what has the potential to exist and so being conceivable, exists *in intellectu*. He seems to equate the former with being *per se* and the latter with

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Gyula Klima, "The Semantic Principles Underlying Saint Thomas Aquinas's *Metaphysics* of Being," pp. 127-36, has an extended discussion of Aquinas' (or a Thomistic) analysis of the inference from *tertium adiacens* to *secundum adiacens*. In any case, his discussion goes far beyond Aquinas and has some peculiar conceptions, e.g., of "a formal rule of inference", p. 129: "Even if an inference is not valid in its form, nothing prevents it from being valid on the basis of the actual meanings of its terms."

<sup>118</sup> More seriously, Aquinas may have had other non-logical motives to take the position he does: Robert Kilwardby in 1277 condemned at Oxford the claim that the simple denial entails the metathetic affirmation even when the subject does not exist ('S is not P (and there does not exist an S); therefore S is not-P'). To be sure, Aquinas had died by then, but still, given bureaucratic delays, it is likely that those who did not give existential import to the metathetic affirmation would have been held suspect earlier. See P. O. Lewry, "Boethian Logic in the Medieval West."

<sup>119</sup> Boethius, *In Librum De Interpretatione Editio Secunda* 532C; cf. 535A. Boethius seems to be following Ammonius, in *De Int.* 161,35-162,5. M. Soreth, "Zum infiniten Prädikat in zehnten Kapitel der Aristotelischen Hermeneutik," p. 394, n. 20, agrees that Aquinas is unusual in following Boethius and Porphyry, whom most Stoics followed too here.

<sup>120</sup> Unlike Ralph McInerny, "Being and Predication," and Étienne Gilson, *Being and Some Philosophers*.

being *per accidens*.<sup>121</sup> So when 'is' is used to connect predicate to subject, it need have existence only *in intellectu*. So statements of *tertium adiacens* have no existential import. Now Aquinas generally takes the metathetic predicate, 'not-P', as equivalent to the privative.<sup>122</sup> As only actual subjects that can have the positive attribute (sight) can have the privation (blindness), accordingly privative, and hence metathetic, predications can apply only to what exists.<sup>123</sup> In this way Aquinas gets existential import for affirmations of *tertium adiacens*.

But all this does not help much for interpreting Aristotle. Not only can Aquinas now not explain texts of Aristotle concerning the indefinite name and verb, but also now he cannot explain how it is possible to speak of what cannot exist at all, as the doctrine being *per accidens* was supposed to do.<sup>124</sup> In particular he would be limiting the syllogistic to terms designating only things that actually exist. Logical inference would hold only for referring expressions.

However, on account of the dominance of Thomism among modern scholastics and medievalists, Aquinas' logical views have come to have considerable importance today in Aristotelian logical theory, so much so that ridiculing Aquinas' logical views for many today amounts to rejecting Aristotle's too. E.g., Peter Geach has accused Aquinas of being an ancestor of the hated "two-names" theory of predication, whereby the copula asserts an identity between subject and predicate: 'S' and 'P' name the same object.<sup>125</sup> Geach has ridiculed this "two-name" theory of predication.<sup>126</sup> He does this mostly because he holds Frege's view that predicates and subjects have radically different logical structures. To be sure, Aquinas does make

<sup>121</sup> *In Metaphysica* V.9 [896]. Hermann Weidemann, "'Socrates est': Zur Logik singularer Existenzaussagen nach Thomas von Aquin," pp. 755-6.

<sup>122</sup> *S.T.* I.5.2 ad 2.

<sup>123</sup> *De. pot.* 7.2 ad 1.

<sup>124</sup> We might save Aquinas' position by way of an extended sense of modality, so that a goat-stag *can* exist, and so have being *in intellectu*. But this again moves us further away from Aristotle.

<sup>125</sup> P. T. Geach, "Forms and Existence," p. 30, complains that "the theory that a true predication is effectively joining two names of the same thing or object, the copula being a sign of this real identity" is logically worthless, for try 'David is the father of Solomon'. He accuses, p. 47, the theory of confusing a name with the bearer of the name. However, he too, p. 42, likes Aquinas' theory to the extent that it distinguishes different logical structures represented by 'is'.

Henry Veatch, "St. Thomas' Doctrine of Subject and Predicate," p. 419, likes Aquinas' theory and defends it against Geach. He rightly complains, p. 406, n. 16, that Geach attacks Aquinas' "two name" theory too rhetorically. Veatch might be right, n. 17, that the difference lies in Geach's not allowing the predicate to refer to objects.

<sup>126</sup> Peter Geach, *Reference and Generality*, pp. 34-6; Hermann Weidemann, "The Logic of Being in Thomas Aquinas," pp. 182; 188.



some remarks like this.<sup>127</sup> Still, this theory looks later and more nominalist, as we shall see with Ockham and Buridan. For Aquinas's theory has the predicate being not 'P' but 'is P', which signifies the essence of P. Scotus will make this clear.<sup>128</sup> But Aquinas does suggest at times that the copula does signify the existence, but perhaps only *in intellectu*.<sup>129</sup> So, like Frege somewhat, Aquinas does give subject and predicate a different logical structure. But, even if we ought to reject Aquinas' views, the rejection of Aristotle's theory does not follow.

**Ockham** Like Avicenna, Ockham presents a theory of predication that clearly has many of the features of the aspect theory that I have attributed to Aristotle. Ockham holds that all affirmations assert existence, and gives conjunctive truth conditions for statements of *tertium adiacens*. He uses this theory systematically in his formal logic.

Ockham holds that every affirmative statement requires that its subject exist *in re*. "S is P" requires that 'S' and 'P' both suppose for, or refer to, the same object.<sup>130</sup> As a result, the inference from A to I, from the universal to the particular universal affirmation, is valid unproblematically.<sup>131</sup> Even an identity statement, of form 'S is S', is false when the subject does not exist, regardless of whether the subject term refers to an item in the categories, like 'Caesar' or 'man' or to something having only a mental existence, like 'chimera'.<sup>132</sup>

In accordance with requiring existential import for all affirmations, Ockham admits the validity of the inference from *tertium adiacens* to *secundum adiacens*. Even 'Homer is a poet; Homer is' is valid. It is just that

<sup>127</sup> S.T. I.13.12. Cf. I.85.5 ad 3; *In V Met.* 11, n. 908. Aquinas offers this generally as the structure of *per se* predication. See Jan Aertsen, *Nature and Creature*, pp. 54-8, who summarizes Aquinas on *Metaphysics* V.7: a predicate *per se* indicates a causal relation [*In V Met.* Lect. 9, 885ff.]; i.e. a formal necessary identity between subject and predicate [*De Pot.* 8,2, ad 6; *In III Sent.* 12,1,1 ad 6]. Also Robert Schmidt, *The Domain of Logic According to St. Thomas Aquinas*, pp. 230-1.

<sup>128</sup> *In Primum Librum Perihermenias Quaestiones* 193b; E. P. Bos, "The Theory of the Proposition According to John Duns Scotus," p. 126.

<sup>129</sup> *In I Sent.* 19.5. Perhaps, because of the present existence of the mind, the copula can come to signify time.

<sup>130</sup> William Ockham, *Summa Logicae* 249,12-17. Likewise for particular and indefinite statements, 249,5-13.

<sup>131</sup> William Ockham, *Summa Logicae* 260,54-7. Cf. 319,55-62. Ockham distinguishes between a categorial and a conditional proposition at 263,131-6.

<sup>132</sup> *Expositio in Librum Praedicamentorum Aristotelis* 434,125-9.

'Homer is a poet' is false, unless taken figuratively, to signify the present existence of Homer's poetry.<sup>133</sup>

Ockham is clear that a simple denial ('S is not P') has disjunctive truth conditions: 'S is not, or P is not predicated of S'.<sup>134</sup> Ockham takes the denial as the contradictory of the affirmation, i.e., as 'not (S is P)'. He then says that the denial is true if 'S' and 'P' do not suppose for the same object. He notes explicitly that this happens in two ways: first, when S does not exist, and second, when subject and predicate do not refer to the same object.<sup>135</sup> So statements containing a negation need not have the existence requirement.<sup>136</sup> However, that depends on the scope of the negation and the structure of the sentence. Inferences like 'a man is not an ass; therefore some animal is not an ass' also require an additional premise, that the subject, 'man', exists, to be valid.<sup>137</sup> Accordingly, neither the E nor the O proposition has existential import. But, as long as the negation have the scope of the entire statement, the inference from universal to particular negative statement follows. As Marilyn Adams notes, Ockham does not give explicitly truth conditions for E propositions in his *Summa*. She suggests the following:

'No A is B' is true if and only if either (i) 'A' does not supposit for anything, or (ii) 'B' does not supposit for anything, or (iii) 'B' does not supposit for anything that 'A' supposits for.<sup>138</sup>

As long as the O proposition be taken similarly (replacing 'anything' with 'something') subalternation holds, without existential import.

Ockham also agrees that the metathetic affirmation does not follow the simple denial.<sup>139</sup> 'S is not P; therefore S is not-P' does not follow. If it ap-

<sup>133</sup> *Expositio in Librum Perihermenias Aristotelis* 454,18-27. Like Ammonius, Boethius, *In Librum Aristotelis De Interpretatione Editio Secunda* 579C, reads 'Homer is a poet' loosely, as 'his poetry exists and remains' and then it follows only that that poetry is.

<sup>134</sup> *Expositio in Librum Praedicamentorum Aristotelis* 387, 56-9; also *Summa Logicae* §72. Marilyn McCord Adams, "Things Versus 'How's', or Ockham on Predication and Ontology," p. 178.

<sup>135</sup> William Ockham, *Summa Logicae* 255, 13-17: "*Sed si talis sit negativa, requiritur quod subiectum et praedicatum non supponant pro omni eodem, immo requiritur quod subiectum pro nullo supponat, vel quod supponat pro aliquo pro quo predicatum non supponit.*"

<sup>136</sup> William Ockham, *Summa Logicae* 256,33-6.

<sup>137</sup> William Ockham, *Summa Logicae* 255, 24-6.

<sup>138</sup> Marilyn McCord Adams, *William Ockham*, Vol. 1, pp. 392-3. Adams is negating the truth conditions for the I proposition which she gives, p. 391, as "if there is something for which 'A' and 'B' both supposit." Here she makes the existence conditions separate and more explicit.

<sup>139</sup> *Expositio in Librum Praedicamentorum Aristotelis* 433,91-4.

pears to, that arises from the subject's being asserted to exist on other grounds, sc., because it is an item in a category.<sup>140</sup> Ockham is clear that the metathetic affirmation has at least two exponents, or truth conditions: 'S is not-P iff 1) S exists and 2) it is false that S is P'.<sup>141</sup>

**Buridan** Like Ockham, Buridan has an aspect theory of predication. Every simple affirmation asserts existence *in re*. If it has terms that do not refer, it must be false. To make existence claims explicit, Buridan even reduces statements of *secundum adiacens* to *tertium adiacens*: 'S is' becomes 'S is an existent thing'.<sup>142</sup> Thus Buridan requires that the subject of every affirmation exist for it to be true.<sup>143</sup>

Buridan takes indefinite names in subject position again to refer only to what exists. Thus he reads 'not-man runs' "adjectivally", as 'what is not a man runs'.<sup>144</sup> However then he has a problem with 'not-being is understood'. We must parse the sentence as 'what is not now but will be is understood'. Otherwise, if 'not-being' refers to what does not exist at any time, the statement is false.<sup>145</sup> Buridan has moved far away from Alexander. Yet it is not clear whether he differs from Aristotle, who said that such assertions hold only for being *per accidens*. As Ockham says too, 'a chimera is a chimera' is false, strictly speaking. Buridan does not want 'chimera' to refer to a concept, for then it would have simple supposition. Rather 'chimera' is a complex concept, the parts of which refer to real objects.<sup>146</sup>

Buridan too supports the "two-name" theory: 'S is P' is true iff S is the same thing that P is.<sup>147</sup> So too for the universal affirmative, the subject must exist, and the predicate must stand, or suppose, for everything for which the subject term stands for.<sup>148</sup> Thus the A to I inference of subalternation has no problems. But, as I have discussed with Ockham, we should

<sup>140</sup> *Expositio in Librum Praedicamentorum Aristotelis* 434,105-8.

<sup>141</sup> William Ockham, *Summa Logicae* 283,25-6.

<sup>142</sup> Peter King, trans. & comm., *Jean Buridan's Logic*, p. 26.

<sup>143</sup> John Buridan, *Sophismata*, p. 26. Sten Ebbesen, "The Chimera's Diary," pp. 136; 139, notes that Ockham at one point in his *Expositio super libros Elenchorum*, p. 264, seems to accept 'the chimera is opinable' as true, and that Buridan corrects him on this point.

<sup>144</sup> Peter King, *Jean Buridan's Logic*, p. 26, notes that Buridan does so generally.

<sup>145</sup> *Sophismata*, p. 97.

<sup>146</sup> *Sophismata*, pp. 29-30. Cf. *Quaestiones Super Perihermenias*, ed. & intro. R. van der Lecq, 9,18-21. As van der Lecq says, p. xxiv. "The name 'chimera' signifies all things that have been composed in the description of the term, although it does not refer to anything." At *Sophismata*, pp. 46-7, he says that 'chimera est chimera' is false. ("Nec auctoritas Boetii est intelligenda nisi ubi termini supponunt pro eodem." Cf. Boethius, *In Librum Aristotelis De Interpretatione Editio Secunda* 577.)

<sup>147</sup> *Sophismata*, p. 43.

<sup>148</sup> *Sophismata*, p. 44.

not take this “two-name” theory to make ‘is’ into an identity relation. For Buridan insists on existential import. Rather, treat ‘is’ like the ‘Lo!’ locution discussed in Chapter One: ‘S is’ becomes ‘Lo! an S!’; ‘S is P’ becomes ‘Lo! An S! And it is a P!’ This approach may sound strange, especially for a universal statement. Today we tend to read universal affirmations hypothetically: if S exists, then it is a P. But, as Peter King puts it, Buridan’s approach seems closer to our natural intuitions: ‘Consider the S’s: they are each P.’<sup>149</sup>

Buridan says that negative statements are true when their affirmative contradictories are false.<sup>150</sup> Thus ‘some S is not P’ is true if ‘every S is P’ is false. Buridan has the disjunctive analysis: either no S exists or there exists some S of which ‘P’ is not predicated.<sup>151</sup> Above we have seen Ockham giving two separate truth conditions sufficient to make an A statement false. Buridan’s treatment of metathetic affirmations shows that he does not require existential import for denials.<sup>152</sup> Thus ‘a chimera is not a man’ is true and ‘a chimera is a not-man’ is false. For the former can be true even though chimeras do not exist. But, if the subject be assumed explicitly to exist, the metathetic affirmation follows the simple denial.<sup>153</sup>

**The Modern Period** So, like Ockham, Buridan gives and uses an aspect theory of predication. Nominalism dominated in logic, science, and mundane metaphysics until the Renaissance and beyond.<sup>154</sup> But there still was variety. In the period of later scholasticism, we can find many medieval views continuing to be represented. For a time, in the fifteenth and sixteenth centuries, nominalism had a great influence along with Thomism and Scotism. Thus we find those like Domingo de Soto reaffirming the aspect theory.<sup>155</sup> Indeed, many in this period included an explicit premise asserting existence, the *constantia*.<sup>156</sup> Following Aquinas and yet heeding later developments, notably Scotus, Suarez distinguishes two readings of a statement of *tertium adiacens*:

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<sup>149</sup> Peter King, *Jean Buridan’s Logic*, p. 25. This view also has some modern logical support. Cf. Nuel Belnap, “Restricted Quantification and Conditional Assertion.”

<sup>150</sup> *Sophismata*, p. 45.

<sup>151</sup> Calvin Normore, “Buridan’s Ontology,” p. 192.

<sup>152</sup> John Buridan, *Quaestiones Super Perihermenias*, 58,1-4.

<sup>153</sup> *Quaestiones Super Perihermenias*, 58,7-10.

<sup>154</sup> E. J. Ashworth, *Language and Logic in the Post-Medieval Period*, pp. 188-90.

<sup>155</sup> G. Nuchelmans, *Late-Scholastic and Humanist Theories of the Proposition*, p. 41; e.g., De Soto.

<sup>156</sup> E. J. Ashworth, “Existential Assumptions in Later Medieval Logic,” p. 146—as in the preceding quote from Buridan.

...the different significations of that copula, *is*, by which the terms in these enunciations are connected, for it can be taken in two ways. First to indicate a connection actual and real, of the terms existing in the thing itself, so that, when it is said, man is an animal, it is an indication that it is really so. Second, it only indicates that the predicate is of the nature of the subject, whether the terms exist or not.<sup>157</sup>

So then some statements have existential import while others do not. But then how to do logic? Evidently by assuming the weaker, copulative theory. Suarez takes 'S is P' in that sense to be equivalent to the conditional, 'if it is S, it is P'.<sup>158</sup> This trend continues later on with the rise of mathematical logic and the resurgence of Thomism. Hence the prevalence of the copulative theory among many Aristotelians today. Thus in neo-scholastic textbooks, we have the doctrine of Aquinas, via Cajetan and John of St. Thomas:

The copula 'is' or 'is not' has a double function. This function may be said to be merely copulative when the copula as yet expresses composition or division in a material fashion only, and simply connects subject and predicate only...The copula has a properly judicative function insofar as it expresses a vital act of assent...<sup>159</sup>

In closing, note that the prevalence of Thomism in neo-scholastic logic textbooks may have contributed to the unsavory modern reputation of Aristotelian syllogistic. For Aquinas gives no reason for holding that statements of *tertium adiacens* make existence claims, since the copula, implicit or explicit, merely relates subject and predicate. Hence A to I subalternation, along with those syllogisms that depend upon it, becomes suspect. Thus there has arisen the famous claim of a missing existential import assumption in Aristotelian syllogistic.<sup>160</sup> In contrast, however, the aspect theory does not have this gap, nor does it fail to handle Aristotle's doctrines about metathetic affirmations. The aspect theory has its flaws, but at least it does not make Aristotle look goofy. Further, as we have seen, many Aristotelian logicians have held it and have dealt with the issues that I have raised while discussing Aristotle. Hence my discussions have not been that anachronistic.

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<sup>157</sup> *Disputationes Metaphysicae* XXXI.12.44 [trans. N. Wells, p. 203].

<sup>158</sup> *Disputationes Metaphysicae* XXXI.12.45 [trans. N. Wells, pp. 204-5].

<sup>159</sup> Jacques Maritain, *An Introduction to Logic*, p. 85.

<sup>160</sup> William and Martha Kneale, *The Development of Logic*, pp. 65-6; P. T. Geach, "The Corruption of Syllogistic."

What must be demonstrated is that the word ‘*est*’ can join a term other than itself to a subject and yet retain existential import....when ‘*est*’ is used copulatively, so that a predicate term is added to it, what is thus determined is that as which the subject exists, thus, for example, ‘Socrates is (as) a man’ or ‘Socrates is (as) a person who is presently reading’.<sup>161</sup>

**Conclusions** From this sketch of the history of predication theory after Aristotle we can draw some conclusions. Varieties of the aspect theory seemed to persist in the period after Aristotle in the Stoics. Alexander too had a view at least consistent with it. However, with Ammonius, the copulative theory was introduced, or revived, coincident with the rule of Proclus. Ammonius had a great influence, direct or indirect, on Boethius, Al-Farabi, Averroes, Albert, and Aquinas. The aspect theory still persisted and may have dominated in certain periods, e.g., of Avicenna and of Ockham and Buridan. But, with the dominance of Thomist interpretations of Aristotelian philosophy today, the copulative theory has become the standard view of Aristotle’s logical theory of predication, little questioned in treatments of his syllogistic. However, I have argued that, whatever its merits, the copulative theory of predication is not Aristotle’s theory of predication.

### *Brentano*

As I have indicated in the footnotes, Franz Brentano locates in Aristotle many of the doctrines that I have found too. In his own work, Brentano advanced a theory of predication having Aristotelian roots. To be sure, his orientation is more psychological than Aristotle’s was. Too, he develops his views in dialogue with other nineteenth-century logicians. Nevertheless, I shall discuss his views briefly as an instance of a modern version of the aspect theory. Furthermore, Brentano was writing in a period during which modern “classical” logic became canonized and standardized. So in his work we can see alternative ways to develop a predicate logic.

Brentano notes the asymmetry in the copulative theory of predication: ‘is’ has different meanings (and logical functions) in statements of *secundum adiacens* and *tertium adiacens*:

What are we to say of the ‘to be’ of the copula and of that sense of ‘to be’ which can be replaced by ‘to exist’, thus making ‘a tree is’ synonymous with

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<sup>161</sup> Klaus Jacobi, “Peter Abelard’s Investigations into the Meaning and Functions of the Speech Sign ‘Est’,” p. 165.

'a tree exists'? Should we say that the 'to be' of the copula has several meanings...?<sup>162</sup>

Brentano dislikes the multiplicity and adopts an aspect theory:

We can deny that there is a distinction of meanings between the 'is' of the copula and the 'is' which stands by itself. 'A tree is green' and 'a green tree is', as well as 'there is a green tree' all come to the same thing. And so I would also venture to affirm that 'a tree is green' comes to the same thing as 'a tree exists as green' (*Ein Baum existiert grün*).<sup>163</sup>

So all affirmations make a statement of existence, which may or may not be determined further by additional predicates. Simple denials deny the statement of existence in the affirmation being negated.

In his account of a statement of *tertium adiacens*, 'S is P', Brentano takes the subject and predicate to form a complex, which then is asserted to be the case. E.g., 'some man is sick' means that there exists a sick man. Likewise, 'no stone is living' means that there does not exist a living stone.<sup>164</sup> We have seen this move from Parmenides on: treating a predication as an existential complex: 'S is P' becomes 'there is a P-S'.

Brentano does not always follow Aristotle. For example, he reverses Aristotle's theory of paronymy. We have seen that Aristotle takes the abstract name, or the adjective taken concretely, to name an item in the categories, while the derivative name, either the concrete name or the adjective taken adjectivally, does not name itself anything strictly speaking. Brentano does the opposite:

...the word 'color', unlike 'colored thing', does not in fact name anything at all. And the same is true of other abstract names. And so the statement 'redness is a color' is not a genuine predication since neither the subject nor the predicate truly names anything.<sup>165</sup>

Indeed, as I remarked in Chapter Five, an Aristotelian might be tempted to do this, for taking the abstract name as fundamental seems to favor Plato more than Aristotle.

<sup>162</sup> Franz Brentano, *Kategorienlehre*, III.VI.25, p. 224 [trans. R. Chisholm & N. Guterman, p. 162].

<sup>163</sup> Franz Brentano, *Kategorienlehre*, III.VI.26, p. 224 [trans. R. Chisholm & N. Guterman, p. 163].

<sup>164</sup> Franz Brentano, *Psychologie von empirischen Standpunkt*, Vol. 2, p. 56-7 [trans. A. Rancarello et al., pp. 212.-3].

<sup>165</sup> Franz Brentano, *Kategorienlehre*, IV.30, p. 261 [trans. R. Chisholm & N. Guterman, p. 186]. Cf. Barry Smith, *Austrian Philosophy*, p. 46.

Another example where Brentano diverges from Aristotle concerns his rejection of 'exists' as a predicate. He says that 'A exists' differs in no way from the simple affirmation of 'A'.<sup>166</sup> Indeed he cites Kant with approval.<sup>167</sup> So too 'S is not' does not deny the predication of 'is' of 'S', but rather denies S. In effect what 'is' or 'exists' does is to assert that the idea or concept presented by 'S' is the case; i.e., that there is a state of affairs *in re* giving rise to our experience of S. On the other hand, Aristotle is willing to equate the bipartite 'S is' with the tripartite 'S is existent', and use that predicate as a term in the syllogistic. [*An. Pr.* 49a23-5; *Soph. El.* 67a2-4]<sup>168</sup> For Brentano, unlike Aristotle, 'is' is never predicated, and never serves to assert the content of a judgment. Rather, an existential statement asserts the presentation of an object to consciousness. (Brentano then has the problem, common from Ammonius onwards, of explaining how fictitious objects like chimeras and goat-stags are present to consciousness.<sup>169</sup>)

Brentano has an unusual way of handling the A and O forms: 'all men are mortal' [A] means that 'there does not exist an immortal man'; 'some man is not learned' [O] means that 'there exists an unlearned man'. In this way Brentano has existential import for the particular propositions and not for the universal ones. Brentano claims to have given "a general proof of the possibility of transforming verbally categorical propositions into existential propositions."<sup>170</sup> He prefers his way to treating universal categorical propositions as disguised hypotheticals (sc., '(x)(Sx  $\supset$  ~Px)') because he has "no idea what the restriction, 'if, indeed, there is a stone', is supposed to mean" when applied to 'no man is a stone'.<sup>171</sup> Remember that for him the universal affirmative proposition is the denial of an existence claim, and so makes no existential claim. Accordingly, Brentano recognizes that "a universal affirmative proposition with an empty subject term is automatically true."<sup>172</sup> To prove syllogisms like Darapti, the subject term must refer.

<sup>166</sup> *Psychologie von Empirischen Standpunkt*, Vol. 2, p. 49 [trans. A. Rancarello et al., p. 208].

<sup>167</sup> *Psychologie von Empirischen Standpunkt*, Vol. 2, p. 53 [trans. A. Rancarello et al., p. 211].

<sup>168</sup> Still Aristotle could say, with Kant, that the copula adds nothing to the content of the judgment but serves only to indicate that that content is real. The content is given in the categories. Cf. *Critique of Pure Reason* B100.

<sup>169</sup> Cf. Robin Rollinger, *Husserl's Position in the School of Brentano*, pp. 26-7; 37.

<sup>170</sup> *Psychologie von Empirischen Standpunkt*, Vol. 2, p. 57 [trans. A. Rancarello et al., pp. 214; 297-8] Cf. Paul Thom, *The Syllogism*, pp. 111-3; Jonathan Barnes, "Terms and Sentences: Theophrastus on Hypothetical Syllogisms," pp. 317-9.

<sup>171</sup> *Psychologie von Empirischen Standpunkt*, Vol. 2, p. 58 [trans. A. Rancarello et al., p. 215]. He takes it as synonymous with 'there is no man that is a stone'. Cf. Peter Simons, "Philosophy and Logic in Central Europe from Bolzano to Tarski," pp. 43-6.

<sup>172</sup> Peter Simons, "Logic in the Brentano School," p. 307.



Brentano described a judgment like *Every A is*, where the subject term has existential import, as a *double judgment* and took it to consist of an affirmation of existence (*A exist*) fused with a dependent non-judgmental part which ascribes a predicate to this object, so that we have *A exist and they are B* for the A form with existential import, and *A exist and they are not B* for the corresponding E form.<sup>173</sup>

So clearly Brentano does not intend to give an interpretation of Aristotle in his theory of predication. Indeed, his method, based on psychologism and introspection, looks more Kantian than Aristotelian, despite his dislike of Kant. Still he does give an aspect theory of predication with Aristotelian roots.

### *Evaluation of the Aspect Theory*

We need not say anything so brutal about the poor old copula as Frege did; that it means nothing at all. In many Greek sentences the copula may be indifferently inserted or omitted: this I think suggests that we should regard it not as meaningless but as a trivial predicable forming operator on predicables.<sup>174</sup>

Here I assess briefly the adequacy of the aspect theory as a logical theory of predication. I shall concentrate on comparing it to the dominant modern theory, that contained in classical (Frege-Russell) logic.<sup>175</sup>

Logical theories can be compared in many ways. Which ways should have the most weight itself may be disputed. Nevertheless I propose the following: 1) the fit of the theory with natural language 2) the ease of proof construction 3) parsimony of ontological commitment. I shall describe each briefly below.

1) How closely does the logical theory fit a natural language, given that the logical theory is supposed to model that language? I mean 'model' here in the sense of providing a system able to analyze statements and arguments made in that language. Ideally, if linguists could come up with a universal, structurally basic language, of which particular languages are instances, we could look at the fit to that. But we do not have this universal language. So

<sup>173</sup> Peter Simons, "Logic in the Brentano School," p. 308.

<sup>174</sup> Peter Geach, "Strawson on Subject and Predicate," p. 181.

<sup>175</sup> Alternatives abound, of course. I should remark that Lesniewski's logic, as it is based on traditional Aristotelian theory, has a copulative theory of predication, but adds an explicit existence condition. See Alex Orenstein, *Existence and the Particular Quantifier*, p. 164.

instead we can compare the fit to various natural languages, like Greek, Arabic, and English.

*Ceteris paribus*, isomorphism between the grammatical and logical structure of the natural language, and of the syntax and semantics of the logical theory, is preferable. Of course, that does not mean, e.g., that we should assign an atomic constant for each singular subject terms, like 'nothing'. Still, when the natural language has nothing inconsistent, obscure, or ambiguous about it, we should prefer a logic for modeling it that does not multiply distinctions without cause.<sup>176</sup>

2) As for ease of constructing proofs in both the object language and in the meta-language, here the notation and syntax of the logical theory play a large role. Note that ease of constructing proofs of one type may come at the expense of difficulty of constructing those of another type: a natural deduction system has easy proofs in the object language and hard proofs in the meta-language; and *vice versa* for an axiomatic system. Again, modern logic has its strengths in proofs but not in translation from natural language. Also we might distinguish different senses of 'ease of constructing' here: analytic-tableaux proofs (trees) are easy to make but hard to understand. Too, we might heed Aristotle's dictum and distinguish 'easy to us' and 'easy in itself', and make some epistemological, psychological, and heuristic distinctions here.

3) We tend to take successful theoretical models, in logic as in science, seriously, as if they described, or as describing, the real world: e.g., atomic theory. So I do not find it amiss to consider what ontological commitments the domain of successful theoretical model would make for us. Different logical theories have different types of objects in their domains. E.g., some domains in predicate logics include individuals as well as their sets and power sets, and both finite and infinite sequences of those individuals. Such domains seem less attractive than ones with fewer and simpler types of objects, *ceteris paribus*.

Before examining the aspect theory, first let me put current attitudes towards Aristotelian logic into historical perspective.<sup>177</sup>

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<sup>176</sup> For a time many have protested that 'exists' is not a predicate, but this protest seems to have faded. One main argument for it concerned the denial '— does not exist': how can 'not exists' be a predicate? Given that the negation can be given external scope, so as to deny the entire claim of existence, this argument fails. See Barry Miller, "In Defense of the Predicate 'Exists'," pp. 339; 351-2.

<sup>177</sup> Also see the section in Chapter Six. For a good critical survey see Dwayne Mulder, "The Existential Assumptions of Traditional Logic." Phillip Wiebe, "Existential Assumptions for Aristotelian Logic," pp. 321-2, surveys the varieties of existential assumptions attributed to Aristotle in modern textbooks.

Aristotelian logic has ill repute among modern logicians mostly on account of the copulative theory: it does not explain existential import for subalternation nor for metathetic predication.<sup>178</sup> Furthermore, on it a statement of *tertium adiacens* consists of a subject, predicate, and a tie between subject and predicate. But modern logicians find this copula, the tie between subject and predicate baffling: "As regards the tie, I cannot understand what sort of thing it could be..."<sup>179</sup> Too, they might find it dangerous: for to admit the tie might require it to refer to an entity, say, a relation:

The difficulty then is that / [the relation connecting a property to the subject] is a relation, and so, on this view, is a universal... As a result, a *new* relation of instantiation will be required to hold between I, on the one hand, and the elements which it relates, on the other. The new relation will then be involved in the same difficulty. The difficulty has been appreciated at least since the work of F. H. Bradley.<sup>180</sup>

Modern logicians instead generally view the predicate as an unsaturated expression to be completed by its arguments (like individual constants). No tie; hence no infinite regress: "For Frege, the copula is a mere grammatical device with no content."<sup>181</sup> In contrast, the copulative theory seems to have no escape from Bradley's regress.

The aspect theory may make Aristotelian logic more respectable. For according to it 'is' does not represent the relation of copulation, but signals the presence of the subject, somewhat in the way that Brentano speaks of "presentation," but a presentation that is incomplete and requires further determination. In itself 'is' does not signify anything, sc., any item in a category. It functions rather like an existential quantifier; its presence makes the verbal phrase unsaturated and makes it possible for the whole statement to assert something true or false.<sup>182</sup> I do not mean to say that it is

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<sup>178</sup> Alonzo Church, "The History of the Question of Existential Import for Categorical Propositions," is a bit more sympathetic. Various modern interpretations of Aristotle's syllogistic have rejected attributing to it a copulative theory of predication. Jan Łukasiewicz, *Aristotle's Syllogistic*, pp. 14-6; John Corcoran, "Aristotle's Natural Deduction System," p. 100.

<sup>179</sup> F. P. Ramsey, "Universals," p. 71.

<sup>180</sup> D. M. Armstrong, "Against 'Ostrich Nominalism'," p. 109. Jonathan Barnes, "Grammar on Aristotle's Terms," p. 178, argues similarly that "the theory of the copula insinuates absurdity."

<sup>181</sup> Michael Dummett, *Frege: Philosophy of Language*, p. 214.

<sup>182</sup> So too for Frege; as Richard Gaskin, "Bradley's Regress, the Copula and the Unity of the Proposition," p. 164, argues, the copula has more than a merely grammatical function in his theory.

an existential quantifier. Rather the aspect theory seems to offer an way of construing statements different from current Frege-Russell logic.

Indeed, many of the features that I have attributed to Aristotle's theory of predication appear again, by inheritance or rediscovery, in modern logical theory. E.g., the construction of an ideal, protocol language in the study of the logic of a natural language:

Whoever wishes, in spite of difficulties, to pursue the semantics of colloquial language with the help of exact methods will be driven first to undertake the thankless task of a reform of this language.<sup>183</sup>

Again, the distinction of paronymy, taking the abstract form as basic:

The offenders may be depended to dismiss the distinction between concrete general terms like 'round' and abstract singular terms like 'roundness' as an insignificant quirk of grammar...This distinction is only a convenient and dispensable way of marking an underlying difference...<sup>184</sup>

Again the doctrine of unnatural predication, that a substantive can function in a proposition only as a subject.<sup>185</sup> So too the doctrine that in the logic of natural language we should treat quantifiers like 'every S' as singular terms.<sup>186</sup> Again, the analysis of the denial of 'S is P' as having disjunctive truth conditions, 'S does not exist or 'P' is not predicated of 'S'', and the distinction between the simple and the metathetic denials.<sup>187</sup> We may well conclude with Robin Smith:

...one cannot fail to be struck by the persistence of predication as a central problem for explication by philosophers in all epochs and by the similarities of interest and approach.<sup>188</sup>

I now begin to assess these theories.

**1) Fit with natural language** Surely it should count heavily, for or against a logical theory to be used to symbolize and model what we say,

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<sup>183</sup> Alfred Tarski, "The Concept of Truth in Formalized Languages," p. 267.

<sup>184</sup> W. V. Quine, *Word and Object*, p. 241; cf. Romane Clark, "Predication and Paronymous Modifiers," pp. 382-8.

<sup>185</sup> W. E. Johnson, *Logic: Part I*, p. 11.

<sup>186</sup> Jaakko Hintikka, "Quantifiers in Logic and Quantifiers in Natural Language," p. 209. Cf. Bertrand Russell, *Principles of Mathematics*; Richard Thomason, "The Proper Treatment of Quantifiers in English."

<sup>187</sup> Alvin Plantinga, "Actualism and Possible Worlds" pp. 270-1; Kit Fine, "The Problem of Non-Existents," p. 11; Richard Gale, *Negation and Not-Being*, p. 20. The last doctrine is Russell's distinction between primary and secondary occurrence of the negation operator.

<sup>188</sup> Robin Smith, Review of *How Things Are*, p. 220.

that it accommodate simple assertions simply. Now the aspect theory has a simple way of handling existence claims, as simple statements of existence. Moreover, on Aristotle's version, it gives singular and universal existence claims the same structure. In contrast, modern logic treats 'Socrates exists' and 'the lion (or: redness) exists' quite differently: the former is ill-formed or at least requires extensive paraphrase; the latter has the structure of a predicate function with existential quantifier (' $(\exists x(\phi x))$ ').<sup>189</sup>

Again, the aspect theory has a unity of predication. It does not distinguish an 'is' of existence, predication, identity, composition, etc. Here too it also mirrors ordinary language. It might be thought that the aspect theory does not have a unitary analysis of predication either. For it does recognize being *per se* and being *per accidens*. However, we too need to distinguish fact from fiction. Further, in developing an ideal, scientific language, we, like Aristotle and Frege, can ignore being *per accidens*.

Because Aristotle and his predecessors developed the aspect theory while working in a natural and not an artificial language, it naturally has a close fit with natural language. Some charge that as a result such a logical theory, like its ontology, naïvely mirrors Greek grammar.<sup>190</sup> But recall that the aspect theory was developed by logicians working in languages in different language groups (Indo-European and Semitic), even ones with opposing grammars for 'be'. So this theory, in its initial development at least, even has some claim to linguistic universality. Also note that Aristotle regiments the natural language severely and artificially, via such doctrines as paronymy, unnatural predication, being *per se*, and the 'ὑπάρχει' construction. So, rather, the language mirrors the ontology.

**2) Syntactic efficiency** Surely one of the strengths of modern logic lies in its syntactic power. From a few rules and primitive symbols many results follow. By contrast, Aristotelian logic suffers.

Oddly, the aspect theory, seen as a fragment of Aristotle's logic, may not suffer as badly. For it has a single fundamental predication structure. Indeed, in the area of predication theory, the notational and computational advantage of modern logical theory may be an illusion: parsimony at one point at the cost of profligacy at another. How many symbols does modern logic have for symbolizing predications? Can it capture the *secundum quid ad simpliciter* inferences, especially those from *tertium adiacens* to *secun-*

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<sup>189</sup> R. M. Martin, "On Existence, Tense, and Logical Form," pp. 29-32, gives a good survey of how many logical operators for 'exists' (not to mention 'is') are used in modern formal logic.

<sup>190</sup> Bertrand Russell, *Introduction to Mathematical Philosophy*, Second Edition, p. 168: "[many logicians] have regarded grammatical form as a surer guide in analysis than, in fact, it is..." Cf. p. 19; Ludwig Wittgenstein, *Tractatus* 4.04.

*dum adiacens* ('S is P; therefore S is')?<sup>191</sup> It needs a theory of types, infinitely regressing, to avoid paradox. Of course, the aspect theory too would have to avoid such paradoxes. In fact, the Aristotelian tradition deals at length with fallacies, sophisms, and insolubles. So perhaps we can find an acceptable modern solution there. Indeed, De Morgan too viewed 'is' as a general symbol, "signifying any type of connection between S and P which satisfies certain logical rules."<sup>192</sup> The separation of this being into the different predication relations came later with Frege and Russell.

**3) Ontological commitment** Augmented by additional doctrines, like the categories and the primacy of substance, the aspect theory reflects Aristotle's metaphysics of substance. Aristotle's metaphysics and ethics have been reappearing frequently in modern discussions. Some of their doctrines fit well with some results in the sciences too. I have argued that Aristotle's logic reflects his ontology and applies easily to natural language. Perhaps his logic too will have renewed interest, if we take the approach of the aspect theory.

If we take our formal semantics realistically, we might be uneasy about recognizing sequences, ordered n-tuples, and *abstracta* of individuals, in addition to the individuals that have the features themselves, as elements of a domain. Likewise, the profligacy of sets and power sets motivate many logicians to find some way to dispense with them in semantics. Perhaps we are stuck with all these types of things: after all, resistance to *irrational* and *imaginary* numbers looks hopeless after so many centuries. Still, it is worth a try to eliminate them on grounds of simplicity. Aristotle's ontology comes much closer to our ordinary experience of the world than these rather Platonic entities. Some of the structure of modern logic might be dispensable.

So, I suggest, the aspect theory has some advantages over current modern theories. I do not advocate abandoning our logical systems in favor of the aspect theory, as it is, after all, but a logical fragment. Nevertheless, I

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<sup>191</sup> Of course, those like Bertrand Russell, *Logic and Knowledge*, p. 233, would reject such arguments as fallacious, logical horrors.

<sup>192</sup> "By 'abstract copula' of course is meant a formal mode of joining two terms which carries no meaning, and obeys no law except such as is barely necessary to make the forms of inference follow." Augustus De Morgan, "On the Structure of the Syllogism," p. 51. De Morgan, p. 52, is clear that this is not the ordinary copula. He goes on to claim that "the least abstract of all copulae is the *is* and *is not* of the logicians." This "is" makes an existence claim. In De Morgan's own theory of the syllogistic, p. 6, 'is' in effect makes an assertion of being *in intellectu*: "When we say, Every X is Y, as a proposition with meaning, and with or without truth as the case may be, we treat neither X nor Y as having any other existence except that which our minds give them: but we imply that if X has any such existence, so has Y...The middle term *must exist*, not necessarily objectively, but it must have positive existence."

do advocate looking into its systematic development. That would require a new notation and some faith. And the effort might fail. But so too goes the history of modern science: progress at the cost of many new starts, including unsuccessful ones.

Existence is univocal. So the tradition insists, and, of course it is right.<sup>193</sup>

### *The Recurrence of the Aspect Theory*

...there are existential presuppositions embodied in the usual system of quantification theory. These presuppositions go far towards explaining the uneasiness of the logicians about empty terms. They have to be explained away before the logicians are able to apply their formal constructs to oral discourse.<sup>194</sup>

An aspect theory has reappeared in some versions of free logic, a logic “free of existence assumptions with respect to its general *and* its singular terms.”<sup>195</sup> Free logic developed as a correction or emending of classical Frege-Russell logic. The latter has problems handling existence claims about singulars: any existence claim about a singular thing is not well formed. E.g., it rejects ‘Pegasus does not exist’ and ‘Homer exists’ as nonsense ( $*\sim(\exists x)p$ ;  $*(\exists x)s$ ).<sup>196</sup> To admit them at all, classical logic had to use roundabout methods, like taking some terms, especially the non-referring terms, as disguised definite descriptions (‘the winged horse’) or sets (‘the set of space-time points comprising Homer’) or predicate functions (‘Pegasizes’). Classical logic has further problems when mixing existential quantification with identity. E.g., ‘ $\alpha = \alpha$ ’ (like ‘a chimera is a chimera’!) looks true even if ‘ $\alpha$ ’ does not refer, but then ‘ $(\exists x)(\alpha = x)$ ’ makes an existence claim for a singular.<sup>197</sup> Again, what to do with predicate functions like ‘ $x$  is the same as  $t$ ’, when ‘ $t$ ’ does not refer?

<sup>193</sup> Gustav Bergmann, *New Foundations of Ontology*, p. 43.

<sup>194</sup> Jaakko Hintikka, “Existential Presuppositions and Existential Commitment,” p. 130.

<sup>195</sup> Karel Lambert, “The Nature of Free Logic,” p. 6.

<sup>196</sup> Gottlob Frege, “On Concept and Object,” p. 50: “The sentence ‘There is Julius Caesar’ is neither true nor false but senseless.” Classical logic has some other versions that may make it less problematic, in particular, those that treat the existential quantifier not as asserting existence but as asserting that the propositional function is sometimes true. Cf. Ludwig Wittgenstein, *Notebooks, 1914-1916*, 9.7.16: “Do not forget that  $(\exists x)Fx$  does not mean: there is an  $x$  such that  $Fx$ , but that there is a true proposition ‘ $Fx$ ’.”

<sup>197</sup> Hughes Leblanc and T. Hailperin, “Non-Designating Singular Terms,” p. 17. Bertrand Russell, *Introduction to Mathematical Philosophy*, pp. 203-4, had already recognized this flaw. Note, as discussed above, that the same problem arises routinely in Aristotelian logic: ‘the chimera is a chimera’.

Classical logic is supposed to be an advance from Aristotelian logic (i.e., in its modern copulative form, as given in the *Port-Royal Logic*<sup>198</sup>) because it allows predicate functions to have no instances. Hence it disallows the A to I and E to O inferences, while Aristotelian logic admits them. Yet we can easily accuse classical logic of having an implicit existential import assumption too. Existential import sneaks in either in demanding that all atomic constants refer to (non-empty) items in the domain, or in having an unrestricted Existential Generalization rule. As with Parmenides it becomes impossible to speak of a thing that “is not”.

As mentioned, there are various ways to handle denials of the existence of individuals, like ‘Socrates does not exist’, in classical logic. We might have a domain of unreal objects, like existence *in intellectu*. We might say that, while the “meaning” of a singular proposition (in the formal model) does not require existence, its use presupposes it. Or, we might follow Russell and Quine and replace all singular terms with descriptions or predicate functions, and thereby eliminate a subject-predicate ontology and embrace a Platonism. Yet all this comes at the cost of weakening the robust sense of reality where individual substances have attributes.

Perhaps a free logic, which emends classical logic to address such problems, fares better. Unlike classical logic, a free logic allows atomic constants without their referring to objects in the domain, either by adding a second domain of non-existent objects<sup>199</sup> or by using a notion of the satisfiability of a sequence or set.<sup>200</sup> Free logics generally admit, in addition to the existential quantifier, a second existence operator, ‘E!’, that applies directly to individuals. In this way, ‘Homer exists’ becomes well formed, ‘E!h’, where ‘h’ is an individual constant. Some versions define ‘E!’ as ‘ $(\exists x)(x = \alpha)$ ’.<sup>201</sup> Others take ‘E!’ as a primitive one-place predicate function.<sup>202</sup>

A free logic seems to contain an aspect theory of predication. For, with a theory taking ‘E!’ as primitive, ‘Homer exists’ makes a simple assertion of existence, of Homer’s real presence. If we take the additional, nominalist step of eschewing Platonism by reducing predicate functions and sets to abstractions and/or sets of individuals (taken as mental acts and not as real entities), we begin to get, once again, an aspect theory like the one that I

<sup>198</sup> Karel Lambert, “The Nature of Free Logic,” p. 3.

<sup>199</sup> Nino Cocchiarella, “Quantification, Time, and Necessity,” pp. 242-3.

<sup>200</sup> Bas van Frassen, “Singular Terms, Truthvalue Gaps, and Free Logic, p. 83. So too Benson Mates and Alfred Tarski.

<sup>201</sup> A. N. Whitehead and Bertrand Russell, *Principia Mathematica* to \*56, p. 29, define ‘E! $\alpha$ ’ as ‘ $(\exists x) x \in \alpha$ ’.

<sup>202</sup> Tyler Burge, “Truth and Singular Terms,” pp. 318-20, summarizes some problems with most versions of free logic.



have attributed to Aristotle. Indeed, Karel Lambert goes so far as to analyze the singular predication, 's is P' as 's exists and s is P'.<sup>203</sup>

Likewise free logics recognizing two domains of objects resemble Aristotle's theory even more strongly. Both recognize simple affirmations that do not make an assertion of existence. Aristotle's distinction of being *per se* and being *per accidens* resembles the free logics that have two domains, one of being and one of not-being.<sup>204</sup> The difference lies in Aristotle's requiring a statement of *per accidens* being to depend upon a statement of *per se* being: generally the subject of the former also is the predicate of the latter. On the other hand, in theory, systems of free logic do not demand such a relation, perhaps because the modern notion, unlike Aristotle's, includes possibilities diverging radically from the actualities in this world. But in practice I wonder just how vacuous a free logic would be with no singular terms that refer. (In some such systems, the so-called negative ones, truth would be hard to define.) I find what differences there may be here a question worth exploring, although I suspect their sources comes partly from the modern view of a logical theory as an uninterpreted, "empty" model, whereas Aristotelians view the interpretation or application of the theory to have a much more central place.

Still clearly Aristotle disagrees with most free logics on some matters: Aristotle takes 'being' and 'is' to have special features. He says that 'S is' is the fundamental form of a statement (unlike predicate logic, which takes the *tertium adiacens* as the basic form). Also Aristotle does take 'is' to serve as a term in syllogistic ('*ōv*'; 'existent').<sup>205</sup> Aristotle recognizes only those universals that have present singular instances. Too he thinks that all universals that have instances at any time always have, or at least always will have, instances: species are eternal.

But statements like "all bodies on which no external forces are acting move uniformly in a given direction" abound in modern science.<sup>206</sup> Likely, no such bodes have ever existed or ever will. We could take Aristotle to bite the bullet, and reject modern science as Platonist, just as he rejected analytic geometry. Yet a kinder answer lies at hand: Aristotle allows for conditional reasoning and indirect proofs, where something is assumed, contrary to actual fact, to exist, relative to the argument. I see no reason

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<sup>203</sup> Karel Lambert, "Fixing Quine's Theory of Predication," p. 158.

<sup>204</sup> E.g., John Woods, "Essentialism, Self-Identity, and Quantifying." William Mann, "Definite Description and the Ontological Argument," p. 266, equates the two with the *in re-in intellectu* distinction.

<sup>205</sup> Jaakko Hintikka, "On the Development of Aristotle's Ideas of Scientific Method and the Structure of Science," pp. 100-1. Cf. *Posterior Analytics* 76b39-77a3; 76b2; 72a17.

<sup>206</sup> Karel Lambert, "The Nature of Free Logic," p. 4.

why we could not suppose the same situation to obtain in modern scientific discourse: for when we talk about a frictionless body or a pointmass, we then posit one to do calculations upon. We act *as if* such a subject exists, during the argument, even though we believe that in reality we cannot experience one. So this objection does not look decisive.<sup>207</sup>

Whether the aspect theory of predication presents a logical theory that should be adopted presents a question beyond the scope of this book. I shall forego too comparing this theory with Heidegger's basic structure of the *Dasein* then qualified by '*als*' in making predications.<sup>208</sup> But let me add one comment. In a recent book of the speculative physics genre, George Greenstein, who no doubt has little acquaintance with any of the material that I have been discussing, says about quantum mechanics:

One of the problems is that English is not a good language for the discussion of these matters. The experiments recounted above appear to involve us in logical paradoxes. A close look shows that they are not devoid of logic...The statement, for example

The electron is a particle  
is shorthand for

The electron is, and is a particle.

Our difficulties are primarily linguistic in nature.<sup>209</sup>

But Greenstein may be misled about the structure of predication. Perhaps English suffices after all.

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<sup>207</sup> See the discussion of *ekthesis* in Chapter Eight for Aristotle's position.

<sup>208</sup> Martin Heidegger, *Sein und Zeit* 149-59.

<sup>209</sup> George Greenstein, *The Symbiotic Universe*, p. 237.



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